

**EXHIBIT B**

**PART 1**

**(Public Version)**

**PUBLIC VERSION**

**UNITED STATES INTERNATIONAL TRADE COMMISSION  
Washington, D.C.**

**In the Matter of**

**CERTAIN COMPUTERS AND  
COMPUTER PERIPHERAL DEVICES  
AND COMPONENTS THEREOF AND  
PRODUCTS CONTAINING THE SAME**

**Inv. No. 337-TA-841**

**INITIAL DETERMINATION ON VIOLATION OF SECTION 337 AND  
RECOMMENDED DETERMINATION ON REMEDY AND BOND**

**Administrative Law Judge Theodore R. Essex**

**(August 2, 2013)**

**Appearances:**

**For the Complainant Technology Properties Limited LLC:**

**Anthony G. Simon, Esq.; Benjamin R. Askew, Esq.; Michael P. Kella, Esq.; and Stephanie H. To,  
Esq. of the Simon Law Firm, P.C. of St. Louis, Missouri**

**For Respondent Hewlett-Packard Co.:**

**Marcia H. Sundeen, Esq.; T. Cy Walker, Esq.; and Aimee N. Soucie, Esq. of Kenyon & Kenyon  
LLP of Washington, D.C.**

**Rose Cordero Prey, Esq. and Bradley D. Roush, Esq. of Kenyon & Kenyon LLP of New York,  
New York**

**For Respondent Seiko Epson Corporation:**

**Louis S. Mastriani, Esq. and Sarah E. Hamblin, Esq. of Adduci, Mastriani & Schaumberg, LLP  
of Washington, D.C.**

**William E. Devitt, P.C.; Matthew J. Hertko, Esq.; Scott S. Evans, Esq.; Adam M. Kaufmann,  
Esq. of Kirkland & Ellis LLP of Chicago, Illinois**

**Edward C. Donovan, Esq. and D. Sean Trainor, Esq. of Kirkland & Ellis LLP of Washington,  
D.C.**

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**For Respondent Kingston Technology Company, Inc.:**

David M. Hoffman, Esq. of Fish & Richardson, P.C. of Austin, Texas

Christine Yang, Esq. and Victoria Hao, Esq. of Law Offices of S.J. Christine Yang of Fountain Valley, California

**For Respondent HiTi Digital, Inc.:**

Darrin A. Auito, Esq. of Westereman, Hattori, Daniels & Adrian, LLP of Washington, D.C.

Jenny W. Chen, Esq. of Chen IP Law Group of Taipei, Taiwan

Vinay V. Joshi of Eastwind Consultants Company Limited of Cleveland, Ohio

**For Respondent Canon Inc.:**

Calvin P. Griffith, Esq., David M. Maiorana, Esq.; David B. Cochran, Esq.; and Tracy A. Stitt, Esq. of Jones Day of Cleveland, Ohio

Ric Macciaroli, Esq. of Jones Day of Washington, D.C.

**For Respondents Newegg Inc. and Rosewill Inc.:**

Kent E. Baldauf, Jr., Esq.; Bryan P. Clark, Esq.; and Ryan J. Miller, Esq. of The Webb Law Firm of Pittsburgh, Pennsylvania

**For Respondent Acer Inc.:**

Eric C. Rusnak, Esq. and Harold Davis, Esq. of K&L Gates LLP of Washington, D.C.

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Pursuant to the Notice of Investigation, 77 Fed. Reg. 26041 (May 2, 2012), this is the Initial Determination of the in the matter of *Certain Computers, Computer Peripheral Devices, and Components Thereof, and Products Containing the Same*, United States International Trade Commission Investigation No. 337-TA-841. See 19 C.F.R. § 210.42(a).

It is held that no violation of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, has occurred in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain computers and computer peripheral devices and components thereof and products containing the same that infringe one or more of claims 7, 11, 19, and 21 of U.S. Patent No. 7,162,549; claims 1, 3, 4, 7, 9, 11, 12, and 14 of the U.S. Patent No. 7,295,443; claims 25, 26, 28, and 39 of U.S. Patent No. 7,522,424; claims 17-19 of the U.S. Patent No. 6,976,623; and claims 1-3 of U.S. Patent No. 7,719,847.

It is held that a violation of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, has occurred in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain computers and computer peripheral devices and components thereof and products containing the same that infringe one or more of claims 1-4 and 9-12 of U.S. Patent No. 6,976,623.

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The following abbreviations may be used in this Initial Determination:

<b>CDX</b>	Complainants' demonstrative exhibit
<b>CIB</b>	Complainants' initial post-hearing brief
<b>CPX</b>	Complainants' physical exhibit
<b>CRB</b>	Complainants' reply post-hearing brief
<b>CX</b>	Complainants' exhibit
<b>Dep.</b>	Deposition
<b>JX</b>	Joint Exhibit
<b>RDX</b>	Respondents' demonstrative exhibit
<b>RIB</b>	Respondents' initial post-hearing brief
<b>RPX</b>	Respondents' physical exhibit
<b>RRB</b>	Respondents' reply post-hearing brief
<b>RRX</b>	Respondents' rebuttal exhibit
<b>RX</b>	Respondents' exhibit
<b>SIB</b>	Staff's initial post-hearing brief
<b>SRB</b>	Staff's reply post-hearing brief
<b>Tr.</b>	Transcript

## PUBLIC VERSION

**I. BACKGROUND<sup>1</sup>****A. Institution and Procedural History of This Investigation**

By publication of a notice in the *Federal Register* on May 2, 2012, pursuant to subsection (b) of section 337 of the Tariff Act of 1930, as amended, the Commission instituted Investigation No. 337-TA-841 with respect to U.S. Patent Nos. 6,976,623 ("the '623 Patent"); 7,162,549 ("the '549 Patent"); 7,295,443 ("the '443 Patent"); 7,522,424 ("the '424 Patent"); 6,438,638 ("the '638 Patent"); and 7,719,847 ("the '847 Patent") to determine:

[W]hether there is a violation of subsection (a)(1)(B) of section 337 in the importation into the United States, the sale for importation, or the sale within the United States after importation of the sale for importation, or the sale within the United States after importation of certain computers and computer peripheral devices and components thereof and products containing the same that infringe one or more of claims 1-4, 9-12, and 17-19 of the '623 patent; claims 7, 11, 19, and 21 of the '549 patent; claims 1, 3, 4, 7, 9, 11, 12, and 14 of the '443 patent; claims 25, 26, 28, and 39 of the '424 patent; claims 13-18 and 25-27 of the '638 patent; and claims 1-3 of the '847 patent, and whether an industry in the United States exists as required by subsection (a)(2) of section 337.

77 Fed. Reg. 26041 (May 2, 2012).

The complainant is Technology Patent Licensing Company, LLC ("TPL") of Cupertino, California. (*Id.*) The Notice of Investigation named the respondents as Acer Inc. of New Taipei City, Taiwan; Brother Industries, Ltd. of Aichi, Japan; Canon Inc. of Tokyo, Japan; Dane-Elec. Memory of Bagnolet Cedex, France; Dell Inc. of Round Rock, Texas; Falcon Northwest Computer Systems, Inc. of Medford, Oregon; Fujitsu Limited, of Tokyo, Japan; Jasco Products

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<sup>1</sup> The ALJ notes, at the outset, that this case has suffered from the parties failing to heed the frequent warning to simplify their case as much as possible that I (and other ALJs) have given in the past. TPL has pushed forward asserting too many patents and too many claims, against too many parties and too many products. TPL's case would have benefitted tremendously by simplifying this case in one of these four dimensions.

Yet, TPL cannot alone be blamed for the unneeded density in this case. Respondents' briefs reveal their reluctance to give up even a single defense or argument, no matter how small or meritless.

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Company of Oklahoma City, Oklahoma ; Hewlett-Packard Company of Palo Alto, California; HiTi Digital, Inc. of New Taipei City, Taiwan; Kingston Technology Company, Inc. of Fountain Valley, California; Micron Technology Company, Inc. of Boise, Idaho; Lexar Media, Inc. of Fremont, California; Microdia Limited, of San Jose, California; Newegg, Inc. of City of Industry, California; Rosewill, Inc. of City of Industry, California; Sabrent of Chatsworth, California; Samsung Electronics Co., Ltd. of Seoul, Korea; Seiko Epson Corporation of Nagano, Japan; Shuttle Inc. of Taipei, Taiwan; and Systemax Inc. of Port Washington, New York. The Commission Investigative Staff ("Staff") of the Office of Unfair Import Investigations was also a party in this investigation. (*Id.*)

On May 22, 2012, the ALJ granted TPL's and Samsung's joint motion to terminate the investigation with respect to Samsung. (Order No. 12.) On June 18, 2012, the Commission determined not to review the initial determination. (*Commission Determination Not to Review an Initial Determination Granting Joint Motion to Terminate*).

On June 8, 2012, the ALJ issued an order granting a motion to terminate Jasco Products Company on the basis of a settlement agreement. (Order No. 14.) On that same day, the ALJ granted a motion to terminate Falcon Northwest Computer Systems, Inc. on the basis of a consent order stipulation and consent order. (Order No. 15.) On June 29, 2012, the Commission determined not to review either order. (*Commission Determination Not to Review an Initial Determination Terminating the Investigation With Respect to Respondent Falcon Northwest Computer Systems, Inc. Based on a Consent Order Stipulation; Entry of Consent Order and Commission Determination Not to Review an Initial Determination Granting a Joint Motion to Terminate the Investigation With Respect to Respondent Jasco Products Company, LLC.*)



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On June 13, 2012, Staff filed a notice of non-participation. (*Commission Investigative Staff's Notice of Non-Participation.*)

On August 9, 2012, the ALJ held a *Markman* hearing. TPL and respondents Dell, Inc., Brother Industries, Ltd., Fujitsu Limited, Newegg Inc., Rosewill Inc., Seiko Epson Corporation, Acer, Inc., Canon Inc., Micron Technology, Inc., Lexar Media, Inc., Systemax Inc., HiTi Digital Inc., Shuttle Inc., Hewlett-Packard Co., and Kingston Technology, Inc. participated in the *Markman* hearing. On October 4, 2012, the ALJ issued the *Markman* order construing the disputed claim terms. (Order No. 23.)

On October 10, 2012, the ALJ granted a motion to terminate respondent Sabrent on the basis of settlement agreement. (Order No. 24.) On November 9, 2012, the Commission determined not to review the order. (*Commission Determination Not to Review an Initial Determination Granting Complainant's Motion to Terminate the Investigation With Respect to Respondent Sabrent.*)

On October 23, 2012, the ALJ issued an initial determination finding respondent Microdia Limited in default for failure to respond to the Complaint and Notice of Investigation. (Order No. 26.) On November 8, 2012, the Commission determined not to review the order. (*Commission Determination Not to Review to Initial Determination Finding Respondent Microdia Limited in Default.*)

On October 26, 2012, the ALJ issued an initial determination terminating respondent Shuttle, Inc. on the basis of consent order. (Order No. 28.) On November 26, 2012, the Commission determined not to review the order. (*Commission Determination Not to Review an Initial Determination Terminating the Investigation With Respect to Respondent Shuttle, Inc. Based on a Consent Order Stipulation; Entry of Consent Order.*)

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On November 6, 2012, the ALJ issued an initial determination granting a joint motion to terminate respondents Micron Technology, Inc. and Lexar Media, Inc. on the basis of settlement agreement. (Order No. 29.) On December 12, 2012, the Commission determined not to review the order. (*Commission Determination Not to Review an Initial Determination Granting a Joint Motion to Terminate the Investigation With Respect to Respondents Micron Technology, Inc. and Lexar Media, Inc.*)

On November 27, 2012, the ALJ issued an initial determination granting a joint motion to terminate respondent Systemex, Inc. on the basis of settlement agreement. (Order No. 34.) On December 20, 2012, the Commission determined not to review the order. (*Commission Determination Not to Review an Initial Determination Granting a Joint Motion to Terminate the Investigation With Respect to Respondent Systemex Inc.*)

On January 8, 2012, the ALJ issued an initial determination granting a joint motion to terminate with respect to respondent Fujitsu Limited. (Order No. 44.) On January 29, 2013, the Commission determined not to review the order. (*Commission Determination Not to Review an Initial Determination Granting a Joint Motion to Terminate the Investigation with Respect to Respondent Fujitsu Limited.*)

On January 7-11, 2013, the ALJ held an evidentiary hearing.

On April 22, 2013, TPL filed a notice that it had filed for reorganization under Chapter 11 of the U.S. Bankruptcy Code in the Bankruptcy Court for Northern District California. (EDIS Doc. ID 508078.)

On June 19, 2013, the ALJ issued an initial determination granting a joint motion to terminate with respect to respondent Dell, Inc. (Order No. 46.) On July 16, 2013, the Commission determined not to review the order. (*Commission Determination Not to Review an*

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*Initial Determination Granting Joint Motion to Terminate Investigation with Respect to Respondent Dell Inc. Based on a Settlement Agreement.)*

On August 1, 2013, TPL and respondent Brother Industries, Inc. filed a joint motion to terminate Brother from the investigation based on settlement agreement. (Motion Docket No. 841-093.) On this same day, the ALJ granted the motion to terminate. (See Order No. 48.)

**B. The Parties**

**1. Technology Properties Limited, LLC**

Complainant Technology Properties Limited, LLC ("TPL") is a California limited liability company involved in the licensing of technology with its principal place of business in Cupertino, California. TPL is the exclusive licensee of the asserted patents. (CIB at 4.)

**2. Acer, Inc.**

Respondent Acer, Inc. ("Acer") is a Taiwanese corporation involved in the manufacture and sale of consumer electronics, including laptops, with a principal place of business in New Taipei City, Taiwan. (RIB at 10-11.)

**3. Canon, Inc.**

Respondent Canon, Inc. ("Canon") is a Japanese corporation involved in the manufacture and sale of consumer electronics, including printers and copiers, with its principal place of business in Tokyo, Japan. (RIB at 10-11.)

**4. Hewlett-Packard Co.**

Respondent Hewlett-Packard Co. ("HP") is a Delaware corporation involved in the manufacture and sale of consumer electronics, such as printers, personal computers, and laptops, with a principal place of business in Palo Alto, California. (RIB at 10-11.)

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**5. HiTi Digital, Inc.**

Respondent HiTi Digital, Inc. ("HiTi") is a Taiwanese corporation involved in the manufacture and sale of consumer electronics with its principal place of business in New Taipei City, Taiwan. (RIB at 10-11.)

**6. Kingston Technology Company, Inc.**

Respondent Kingston Technology Company, Inc. ("Kingston") is a California corporation with a principal place of business in Fountain Valley, California. (RIB at 10-11.)

**7. Newegg, Inc. and Rosewill Inc.**

Respondent Newegg, Inc. ("Newegg") is a Delaware corporation involved in the sale of consumer electronics with a principal place of business in City of Industry, California. Respondent Rosewill Inc. is a California corporation that is a subsidiary of Newegg and has its principal place of business in City of Industry, California. (RIB at 10-11.)

**8. Seiko Epson Corporation**

Respondent Seiko Epson Corporation ("Seiko Epson") is a Japanese corporation involved in the manufacture and sale of printers and other consumer electronics with its principal place of business in Nagano, Japan. (RIB at 10-11.)

**C. The Patents at Issue and Overview of the Technology**

The following Table summarizes the patents and claims that are asserted against Respondents in this investigation.

## PUBLIC VERSION

	US '443								US '424				US '847				US '549				US '623									
	1	3	4	7	9	11	12	14	25	26	28	29	1	2	3	7	11	19	21	1	2	3	4	9	10	11	12	17	18	19
Acer					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Canon	X	X	X	X	X	X	X	X	X	X	X	X																		
HP	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X										
Hitachi					X				X	X	X	X																		
Kingston					X	X	X		X	X	X	X								X	X			X	X			X	X	
NewEgg and Rosewill					X	X	X		X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Seiko Epson	X	X		X	X	X			X	X	X	X				X	X	X	X											

**Table 1 – Summary of Patents and Claims Asserted by TPL****1. The '638 Patent**

U.S. Patent No. 6,438,638 (“the '638 Patent”), entitled “Flashtoaster for Reading Several Types of Flash-Memory Cards With or Without a PC,” was filed on July 6, 2000, and issued on August 20, 2002. (See JX-0005). Larry Lawson Jones, Sreenath Mambakkam, and Arocklyaswamy Venkidu are the named inventors of the '638 Patent. (*Id.*) The '638 Patent generally discloses and claims flash memory readers, particularly for interfacing several types of flash-memory cards to a personal computer. (*Id.* at Abstract.) This patent was originally asserted only against respondent Dell. Dell is no longer a party to this investigation. The '638 Patent was only asserted against respondent Dell. After the hearing and before the issuance of this Final ID, Dell was terminated from this investigation based on a settlement agreement. (See Order No. 46.) Because the '638 Patent is not asserted against any remaining respondent to this investigation, the ALJ finds that there are no active infringement allegations remaining. Accordingly, the ALJ finds the infringement allegations with respect to the '638 Patent are MOOT. The ALJ also finds any validity or domestic industry allegations MOOT. The ALJ includes the '638 Patent here only because it remains an issue because TPL asserts that a number of the asserted patents are entitled to claim priority to this patent.

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**2. The '443 Patent**

U.S. Patent No. 7,295,443 ("the '443 Patent"), entitled "SmartConnect Universal Flash Media Card Adapters," was filed on July 24, 2006, and issued on November 13, 2007. (See JX-0003). Larry Lawson Jones, Sreenath Mambakkam, and Arocklyaswamy Venkidu are the named inventors of the '443 Patent. (*Id.*)

The asserted claims of the '443 Patent are claims 1, 3, 4, 7, 9, 11, 12, and 14. Claims 1 and 9 are independent claims and claims 3, 4, and 7 depend on claim 1 and claims 11, 12, and 14 depend on claim 9. These claims read as follows (with the disputed claim terms in **bold**):

**1. A multi-memory media adapter comprising:**

a first planar element having an upper surface and a lower surface, the first planar element comprising molded plastic;

a second planar element having an upper surface and a lower surface, the first planar element and the second planar element disposed such that a port is formed between the lower surface of the first planar element and the upper surface of the second planar element, the port capable of receiving a memory media card, the second planar element comprising molded plastic;

at least one set of contact pins protruding from the lower surface of the first planar element or the upper surface of the second planar element such that the at least one set of contact pins are disposed within the port, the at least one set of contact pins capable of contacting a set of memory media card contacts, wherein the at least one set of **contact pins are integrated within the molded plastic** of the first planar element or the second planar element; and

a controller chip to map at least a subset of the at least one set of **contact pins to a set of signal lines or power lines, based on an identified type of a memory media card.**

**3. The multi-memory media adapter of claim 1 having a system connector surface-mounted thereon, the system connector electrically coupled to the at least one set of contact pins.**

**4. The multi-memory media adapter of claim 3 wherein the system connector is selected from the group comprising of a PCMCIA, USB, WiFi, Firewire, IDE, serial ATA connector, an IDE, and a CompactFlash connector.**

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7. The multi-memory media adapter of claim 1 having at least 18 contact pins configured to accommodate at least one of a group comprising, an xD, MMC/SD, Memory Stick, miniSD, RSMMC, and MS Duo.

9. A system comprising:

**a multi-memory media adapter** to read data from a plurality of memory media cards, the multi-memory media adapter having at least one port formed between an upper portion and a lower portion of the multi-memory media adapter, the port to receive a memory media card of the plurality of memory media cards;

a set of contact pins protruding from the upper portion or the lower portion, the set of contact pins to contact a set of memory media card contacts, wherein the set of **contact pins are integrated within molded plastic** of the upper portion or the lower portion; and

**a controller integrated into the multi-memory media adapter to map at least a subset of the set of contact pins to a set of signal lines or power lines, based an identified type of the memory media card.**

11. The system of claim 9 further comprising a system connector, the system connector electrically coupled to the set of contact pins.

12. The system of claim 11 wherein the system connector is selected from the group comprising of a PCMCIA, USB, WiFi, Firewire, IDE, serial ATA connector, an IDE, and a CompactFlash connector.

14. The system of claim 9 having at least eighteen contact pins configured to accommodate at least one of a group comprising, an xD, MMC/SD, Memory Stick, miniSD, RSMMC, and MS Duo.

The '443 Patent is directed to certain aspects of multi-memory flash media adapters that can interface with several types of flash media cards. (*Id.* at Abstract.)

### 3. The '424 Patent

U.S. Patent No. 7,522,424 ("the '424 Patent"), entitled "SmartConnect Universal Flash Media Card Adapters," was filed on September 19, 2007, and issued on April 21, 2009. (*See* JX-0004). Larry Lawson Jones, Sreenath Mambakkam, and Arocklyaswamy Venkidu are the named inventors of the '424 Patent. (*Id.*)



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The asserted claims of the '424 Patent are claims 25, 26, 28, and 29. Claims 25 and 28 are independent claims and claims 26 and 29 depend on claims 25 and 28 respectively. The asserted claims are (with disputed terms in bold):

25. Apparatus comprising:

a housing having a port and a surface;

an **interconnection means** having a plurality of **interconnection pins**;

one or more sets of **contact pins mounted on said surface at locations adapted to interface with the electrical contacts of a corresponding one of a plurality of different types of memory media cards** when inserted into said port;

a set of signal lines connected to said interconnection pins;

**means for identifying the type of memory card inserted into said port;**

**means for mapping power, ground or data signals between said interconnection pins and said one or more contact pins depending upon the identification of the type of memory card inserted into said port.**

26. Apparatus according to claim 25 where the means for mapping comprises a controller.

28. Apparatus comprising:

a housing having a port and a surface;

a plurality of sets of **contact pins mounted on said surface at locations adapted to interface with the electrical contacts of a corresponding one of a plurality of different type memory media cards** when inserted into said port;

a set of signal lines connected to an **interconnection means**;

**means for identifying the type of memory card inserted into said port;**

**means for mapping power, ground or data signals between said interconnection means and said one or more contact pins depending upon the identification of the type of memory card inserted into said port.**



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29. Apparatus according to claim 28 where said means for mapping comprises a controller.

The '424 Patent is directed to certain aspects of multi-memory flash media adapters that can interface with several types of flash media cards. (*Id.* at Abstract.)

4. The '847 Patent

U.S. Patent No. 7,719,847 ("the '847 Patent"), entitled "SmartConnect Universal Flash Card Adapter," was filed on August 11, 2008, and issued on May 18, 2010. (*See* JX-0006). Larry Lawson Jones, Sreenath Mambakkam, and Arocklyaswamy Venkidu are the named inventors of the '847 Patent. (*Id.*)

TPL has asserted Claims 1-3 of the '847 patent. Claim 1 is an independent claim and claims 2 and 3 depend on claim 1. The asserted claims read as follow (with the disputed terms in bold):

1. Apparatus comprising:

a housing having a port and a surface;

a plurality of sets of **contact pins** mounted on said surface at locations adapted to interface with the electrical contacts of a **plurality of different type memory media cards** when inserted into said port;

a set of signal lines connected to a controller, the number of signal lines being fewer than the number of **contact pins**;

the signal lines located between the controller and an **interconnection means**; said interconnection means being located between the signal lines and the plurality of sets of contact connecting said signal lines to said one or more **contact pins**; and

**means for mapping power, ground or data signals between said signal lines and said contact pins depending upon the identification of the type of memory card inserted into said port;**

wherein the means for mapping comprises a controller.

2. Apparatus according to claim 1 where said controller comprises means for determining the type of memory card inserted into said port.

3. Apparatus according to claim 1 wherein said interconnection means is selected

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from a group consisting of simple wires, flat cables, printed circuit board interconnections, or wiring traces.

The '847 Patent is directed generally towards flash media adapters. (*Id.* at Abstract.)

**5. The '549 Patent**

U.S. Patent No. 7,162,549 ("the '549 Patent"), entitled "Multimode Controller for Intelligent and 'Dumb' Flash Cards," was filed on October 2, 2002, and issued on January 9, 2007. (*See* JX-0002). Larry Lawson Jones, Sreenath Mambakkam, Arocklyaswamy Venkidu, and Nicholas Antonopoulos are the named inventors of the '549 Patent. (*Id.*)

TPL asserted claims 7, 11, 19 and 21. Claims 7 and 11 are independent claims and claims 19 and 21 depend on claims 7 and 11, respectively. The asserted claims are (with disputed terms in bold):

**7. A method comprising:**

using a controller chip to interface a flash storage system with or without a controller to a computing device, the controller chip comprising a **flash adapter**, wherein the flash storage system comprises a flash section and at least a medium ID;

determining whether the flash storage system includes a controller for error correction; and

in an event where the flash storage system does not have a controller for error correction, using firmware in the flash adapter to perform operations to manage error correction of the flash section, including bad block mapping of the flash section in the flash storage system that is coupled to the **flash adapter section**.

**11. A system comprising:**

a computing device;

a flash storage system comprising a flash section and at least a portion of a medium ID; and

a controller chip coupled between the computing device and the flash storage system to interface the flash storage system to the computing device, the controller chip comprising an interface mechanism capable of receiving flash storage systems with controller and controllerless flash storage systems, a detector

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to determine whether the flash storage system includes a controller for error correction and a **flash adapter** which comprises firmware to perform, in an event where the flash storage system does not have a controller for error correction, operations to manage error correction of the flash section, including bad block mapping of the flash section in the flash storage system that is coupled to the **flash adapter section**.

19. The method of claim 7, wherein the flash adapter further comprises a plurality of interfaces for receiving a plurality of flash storage systems.

21. The system of claim 11, wherein the flash adapter further comprises a plurality of interfaces for receiving a plurality of flash storage systems.

The '549 Patent is directed to a controller that can interface with memory cards, both with and without onboard controllers, and perform error correction including block mapping. (*Id.* at Abstract.)

## 6. The '623 Patent

U.S. Patent No. 6,976,623 ("the '623 Patent"), entitled "Flash Juke Box," was filed on October 2, 2002, and issued on January 9, 2007. (*See* JX-0001). Larry Lawson Jones, Sreenath Mambakkam, and Arocklyaswamy Venkidu are the named inventors of the '623 Patent. (*Id.*) TPL has asserted Claims 1-4, 9-12 and 17-19 of the '623 Patent. Claims 1, 9, and 17 are independent claims. Claims 2-4 depend on claim 1, claims 10-12 depend on claim 9, and 18-19 depend on claim 17. The asserted claims read as follow (with the disputed terms in bold):

### 1. A memory card interface apparatus comprising:

a plurality of memory card interfaces comprising a first subset to interface with a memory card of a first type and a second subset to interface with a memory card of a second type, wherein the memory card of the first type and the memory card of the second type are **accessible in parallel** to transfer data from the memory card of the first type to the memory card of the second type.

2. The apparatus of claim 1, wherein at least one of the memory card interfaces is configured to read a plurality of different memory card types.

3. The apparatus of claim 1, wherein at least one of the memory card

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interfaces includes an indicator identifying a status of an operation for a respective memory reader interface.

4. The apparatus of claim 1, wherein the indicator includes a light indicating data is being written to a card in the respective memory card interface.

9. A system comprising:

a controller circuit;

a bus coupled to the controller circuit;

a plurality of memory card interfaces comprising a first subset to interface with a memory card of a first type and a second subset to interface with a memory card of a second type, wherein the memory card of the first type and the memory card of the second type are **accessible in parallel** to transfer data from the memory card of the first type to the memory card of the second type.

10. The system of claim 7, wherein at least one of the memory card interfaces is configured to interface with a plurality of different memory card types.

11. The system of claim 7, wherein at least one of the memory card interfaces includes an indicator identifying a status of an operation for a respective memory card interface.

12. The system of claim 9, wherein the indicator includes a light indicating data is being written to a card in the respective memory card interface.

17. A method comprising:

providing access to a plurality of memory card interfaces comprising a first subset to interface with a memory card of a first type and a second subset to interface with a memory card of a second type;

and selectively operating the first and second subsets to **provide access to the memory cards of the first and second types in parallel to transfer data from the memory card of the first type to the memory card of the second type.**

18. The method of claim 17, wherein at least one of the memory card interfaces is configured to interface with a plurality of different memory card types.

19. The method of claim 17, wherein at least one of the memory card interfaces

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includes an indicator identifying a status of an operation for a respective memory card interface.

The '623 Patent relates generally to flash memory readers. (*Id.*)

### **D. The Products At Issue**

#### **1. The Accused Products**

The accused products are listed below by respondent in charts. The claims for the patents asserted against each product are identified in the charts. If no claims are listed, that patent is not asserted against the product for which no claims are listed.

RESPONDENT/ACER					
Model Number	443	424	847	549	623
Aspire AX 1935 (Rev. A.)	Cl. 9, 11, 12, 14	Cl. 25, 26, 28, 29	Cl. 1, 2, 3	Cl. 7, 11, 19, 21	
Aspire M3970					Cl. 1-4, 9-12, 17-19
Aspire AS7750 (Rev. B)	Cl. 9, 14	Cl. 25, 26, 28, 29	Cl. 1, 2, 3	Cl. 7, 11, 19, 21	
Aspire AS5349 (Rev. A)	Cl. 9	Cl. 25, 26			
Aspire AS5349 (Rev. B)	Cl. 9	Cl. 25, 26			
Aspire S5 S5-391	Cl. 9	Cl. 25, 26			
Aspire V5 V5-431 (Rev. A)	Cl. 9	Cl. 25, 26			
Aspire V5 V5-431 (Rev. B)	Cl. 9	Cl. 25, 26			
Chromebook AC700 (Rev. A)	Cl. 9	Cl. 25, 26, 28, 29			
Chromebook AC700 (Rev. B)	Cl. 9	Cl. 25, 26, 28, 29			
Aspire AS5750 (Rev. A)	Cl. 9	Cl. 25, 26, 28, 29			
Aspire AS5750 (Rev. B)	Cl. 9	Cl. 25, 26, 28, 29			
Aspire AS7750 (Rev. A)	Cl. 9	Cl. 25, 26, 28, 29			
Aspire AS8951G	Cl. 9	Cl. 25, 26, 28, 29			
Aspire V3 V3-551 (Rev. A)	Cl. 9	Cl. 25, 26, 28, 29			

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RESPONDENT ACER					
Model Number	443	424	4847	549	623
Aspire V3 V3-551 (Rev. B)	Cl. 9	Cl. 25, 26, 28, 29			
Aspire AZ3771-UR20P	Cl. 9	Cl. 25, 26			
Aspire Slimline All-in-one A5600U	Cl. 9	Cl. 25, 26			
Aspire All in One AZ1620	Cl. 9	Cl. 25, 26			
All in One Z3 AZ3170	Cl. 9	Cl. 25, 26			
Veriton Z VZ291G	Cl. 9	Cl. 25, 26			
ZX4250	Cl. 9	Cl. 25, 26			
Veriton N281G	Cl. 9	Cl. 25, 26			
Aspire M3 AM3420 (Rev. A)	Cl. 9	Cl. 25, 26			
Aspire M3 AM3420 (Rev. B)	Cl. 9	Cl. 25, 26			
Aspire X1 AX1935 (Rev. B)	Cl. 9	Cl. 25, 26, 28, 29			
SX2370 (Rev. A)	Cl. 9	Cl. 25, 26			
SX2370 (Rev. B)	Cl. 9	Cl. 25, 26,			
Revo 70 RL70	Cl. 9	Cl. 25, 26, 28, 29			

RESPONDENT CANON		
Model Number	443	4621
PIXMA-MG8220	Cl. 1, 3, 4, 7, 9, 11, 12, 14	Cl. 25, 26, 28, 29
PIXMA-MG5520	Cl. 1, 3, 4, 7, 9, 11, 12, 14	Cl. 25, 26, 28, 29
PIXMA-MG6220	Cl. 1, 3, 4, 7, 9, 11, 12, 14	Cl. 25, 26, 28, 29
PIXMA-MX712	Cl. 1, 3, 4, 7, 9, 11, 12, 14	Cl. 25, 26, 28, 29
PIXMA-MG5320	Cl. 1, 3, 4, 7, 9, 11, 12, 14	Cl. 25, 26, 28, 29
Colorimage CLASS MF9280Cdn	Cl. 9	Cl. 25, 26, 28, 29
Colorimage Runner C1030	Cl. 9	Cl. 25, 26, 28, 29
Colorimage Runner C1030if	Cl. 9	Cl. 25, 26, 28, 29
SELPHY CP800	Cl. 9	Cl. 25, 26
SELPHY CP900	Cl. 9	Cl. 25, 26
Canon Multimedia reader/writer A1 3721B001AA-Group E	Cl. 9	Cl. 25, 26, 28, 29

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RESPONDENT: CANON		
Model Number	443	424
Canon Multimedia reader/writer A1 3721B002AA-Group E	Cl. 9	Cl. 25, 26, 28, 29

RESPONDENT: HEWLETT-PACKARD				
Model Number	443	424	847	549
HP 644491-001	Cl. 9, 11, 12, 14	Cl. 25, 26		Cl. 7, 11, 19, 21
6in1 Media Card Reader	Cl. 9, 11, 12, 14	Cl. 25, 26, 28, 29	Cl. 1, 3	Cl. 7, 11, 19, 21
HP Slimline S5-1260	Cl. 9, 11, 12, 14	Cl. 25, 26, 28, 29	Cl. 1, 3	Cl. 7, 11, 19, 21
HP Pavilion HPE Phoenix h9-1130	Cl. 9, 11, 12, 14	Cl. 25, 26, -		Cl. 7, 11, 19, 21
HP Photosmart 5510	Cl. 1, 3, 4, 7, 9, 11, 12, 14	Cl. 25, 26, 28, 29		
HP Photosmart 5512	Cl. 1, 3, 4, 7, 9, 11, 12, 14	Cl. 25, 26, 28, 29		
HP Photosmart 5514	Cl. 1, 3, 4, 7, 9, 11, 12, 14	Cl. 25, 26, 28, 29		
HP Photosmart 5515	Cl. 1, 3, 4, 7, 9, 11, 12, 14	Cl. 25, 26, 28, 29		
HP Photosmart 5520	Cl. 1, 3, 4, 7, 9, 11, 12, 14	Cl. 25, 26, 28, 29		
HP Photosmart 5522	Cl. 1, 3, 4, 7, 9, 11, 12, 14	Cl. 25, 26, 28, 29		
HP Photosmart 5525	Cl. 1, 3, 4, 7, 9, 11, 12, 14	Cl. 25, 26, 28, 29		
HP 630/631	Cl. 9	Cl. 25, 26		
HP2000	Cl. 9	Cl. 25, 26		
HP430/431	Cl. 9	Cl. 25, 26		
HP435/436	Cl. 9	Cl. 25, 26		
HP635/636	Cl. 9	Cl. 25, 26		
Presario CQ57 (HP2000)	Cl. 9	Cl. 25, 26		
HP OfficeJet Pro 8600 e-AIO	Cl. 9	Cl. 25, 26		
HP OfficeJet Pro 8600 Plus e-AIO	Cl. 9	Cl. 25, 26		
HP OfficeJet Pro 8600 Premium e-AIO	Cl. 9	Cl. 25, 26		



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RESPONDENT HEWLETT-PACKARD				
Model Number	443	424	847	549
Pavilion dv3- [REDACTED]	Cl. 9	Cl. 25, 26, 28, 29		
Pavilion dv7 [REDACTED]	Cl. 9	Cl. 25, 26, 28, 29		
Pavilion dv4 [REDACTED]	Cl. 9	Cl. 25, 26, 28, 29		
Pavilion dm4 [REDACTED]	Cl. 9	Cl. 25, 26, 28, 29		
Pavilion dv3 [REDACTED]	Cl. 9	Cl. 25, 26, 28, 29		
Pavilion dm4 [REDACTED]	Cl. 9	Cl. 25, 26		
Pavilion dv4 [REDACTED]	Cl. 9	Cl. 25, 26		
Pavilion dv6 [REDACTED]	Cl. 9	Cl. 25, 26, 28, 29		
Pavilion dv7 [REDACTED]	Cl. 9	Cl. 25, 26, 28, 29		
Envy 13 [REDACTED]	Cl. 9	Cl. 25, 26		
Pavilion g6 [REDACTED]	Cl. 9	Cl. 25, 26		
Pavilion g7 [REDACTED]	Cl. 9	Cl. 25, 26		
ENVY 15 [REDACTED]	Cl. 9	Cl. 25, 26		
Pavilion dml [REDACTED]	Cl. 9	Cl. 25, 26, 28, 29		
Pavilion dv6 [REDACTED]	Cl. 9	Cl. 25, 26		
Pavilion dv7 [REDACTED]	Cl. 9	Cl. 25, 26		
ENVY 17 [REDACTED]	Cl. 9	Cl. 25, 26, 28, 29		
HP ENVY 14 SPECTRE [REDACTED]	Cl. 9	Cl. 25, 26		
HP 2000 [REDACTED]	Cl. 9	Cl. 25, 26		
HP 650 [REDACTED]	Cl. 9	Cl. 25, 26		
Presario CQ58 HP 2000 [REDACTED]	Cl. 9	Cl. 25, 26		
Pavilion dm4 [REDACTED]	Cl. 9	Cl. 25, 26		
Pavilion dv4 [REDACTED]	Cl. 9	Cl. 25, 26		
ENVY 14 [REDACTED]	Cl. 9	Cl. 25, 26		
ENVY 15 [REDACTED]	Cl. 9	Cl. 25, 26		
ENVY 17 [REDACTED]	Cl. 9	Cl. 25, 26		



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RESPONDENT HEWLETT PACKARD				
Model Number	443	424	847	549
HP 450 [REDACTED]	Cl. 9	Cl. 25, 26		
HP 455 [REDACTED]	Cl. 9	Cl. 25, 26		
Presario CQ58HP 2000 [REDACTED]	Cl. 9	Cl. 25, 26		
ENVY 14 [REDACTED]	Cl. 9	Cl. 25, 26		
Pavilion dm1 [REDACTED]	Cl. 9	Cl. 25, 26		
ENVY 6 [REDACTED]	Cl. 9	Cl. 25, 26		
Pavilion dm1 [REDACTED]	Cl. 9	Cl. 25, 26		
Pavilion dv7 [REDACTED]	Cl. 9	Cl. 25, 26		
ENVY 4 [REDACTED]	Cl. 9	Cl. 25, 26		
ENVY 6 [REDACTED]	Cl. 9	Cl. 25, 26		
Pavilion m6 [REDACTED]	Cl. 9	Cl. 25, 26		
Pavilion dv6 [REDACTED]	Cl. 9	Cl. 25, 26		
Pavilion dv6 [REDACTED]	Cl. 9	Cl. 25, 26		
Pavilion dv7 [REDACTED]	Cl. 9	Cl. 25, 26		
Pavilion dv4 [REDACTED]	Cl. 9	Cl. 25, 26		
Pavilion g6 [REDACTED]	Cl. 9	Cl. 25, 26		

RESPONDENT HITI		
Model Number	443	424
P110S	Cl. 9, 14	Cl. 25, 26, 28, 29
P510S/Si	Cl. 9, 14	Cl. 25, 26, 28, 29
BS-id400	Cl. 9, 14	Cl. 25, 26, 28, 29
S420	Cl. 9, 14	Cl. 25, 26, 28, 29
P510K	Cl. 9	Cl. 25, 26
T570	Cl. 9	Cl. 25, 26

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RESPONDENT KINGSTON				
Model Number	443	424	623	
FCR-HS219/1	Cl. 9, 11, 12	Cl. 25, 26, 28, 29	Cl. 1, 2, 9, 10, 17, 18	
FCR-HS219/CR	Cl. 9, 11, 12	Cl. 25, 26, 28, 29	Cl. 1, 2, 9, 10, 17, 18	
FCR-HS219/KR	Cl. 9, 11, 12	Cl. 25, 26, 28, 29	Cl. 1, 2, 9, 10, 17, 18	
FCR-HS3	Cl. 9	Cl. 25, 26, 28, 29	Cl. 1, 9, 17	
FCR-MLG3	Cl. 9	Cl. 25, 26, 28, 29	Cl. 1, 9, 17	

RESPONDENT SENECA/ROSEVILLE				
Model Number	443	424	549	623
RCR-YJ-EX601	Cl. 9, 11, 12	Cl. 25, 26	Cl. 7, 11, 19, 21	Cl. 1-4, 9-12, 17-19
RCR-IM5001	Cl. 9, 11, 12	Cl. 25, 26		Cl. 1-4, 9-12, 17-19
RCR-IC002	Cl. 9, 11, 12	Cl. 25, 26	Cl. 7, 11, 19, 21	Cl. 1-4, 9-12, 17-19
RDCR-11004	Cl. 9, 11, 12	Cl. 25, 26	Cl. 7, 11, 19, 21	Cl. 1-4, 9-12, 17-19
RCR-AK-IM5002	Cl. 9, 11, 12	Cl. 25, 26		Cl. 1-4, 9-12, 17-19

RESPONDENT SEIKO EPSON				
Model Number	443	424	549	
Seiko Epson Artisan 730	Cl. 1, 3, 7, 9, 11, 14	Cl. 25, 26, 28, 29	Cl. 7, 11, 19, 21	
Artisan 725 (Arctic Edition)	Cl. 1, 3, 7, 9, 11, 14	Cl. 25, 26, 28, 29	Cl. 7, 11, 19, 21	
Artisan 725	Cl. 1, 3, 7, 9, 11, 14	Cl. 25, 26, 28, 29	Cl. 7, 11, 19, 21	
Artisan 837	Cl. 1, 3, 7, 9, 11, 14	Cl. 25, 26, 28, 29	Cl. 7, 11, 19, 21	
Stylus NX330	Cl. 1, 9	Cl. 25, 26, 28, 29		
Stylus NX430	Cl. 1, 9	Cl. 25, 26, 28, 29		
PM 300	Cl. 1, 9	Cl. 25, 26, 28, 29	Cl. 7, 11, 19, 21	
Stylus NX625	Cl. 1, 9	Cl. 25, 26, 28, 29	Cl. 7, 11, 19, 21	
WorkForce 545	Cl. 1, 9	Cl. 25, 26, 28, 29	Cl. 7, 11, 19, 21	
WorkForce 630	Cl. 1, 9	Cl. 25, 26, 28, 29	Cl. 7, 11, 19, 21	
WorkForce 635	Cl. 1, 9	Cl. 25, 26, 28, 29	Cl. 7, 11, 19, 21	
WorkForce 645	Cl. 1, 9	Cl. 25, 26, 28, 29	Cl. 7, 11, 19, 21	
WorkForce 840	Cl. 1, 9	Cl. 25, 26, 28, 29	Cl. 7, 11, 19, 21	
WorkForce 845	Cl. 1, 9	Cl. 25, 26, 28, 29	Cl. 7, 11, 19, 21	
WorkForce WF-7510	Cl. 1, 9	Cl. 25, 26, 28, 29	Cl. 7, 11, 19, 21	
WorkForce WF-7520	Cl. 1, 9	Cl. 25, 26, 28, 29	Cl. 7, 11, 19, 21	
Stylus NX530	Cl. 1, 9	Cl. 25, 26, 28, 29	Cl. 7, 11, 19, 21	
XP-400	Cl. 1, 9	Cl. 25, 26, 28, 29		

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## 2. Domestic Industry Products

TPL contends that products incorporating OnSpec chips meets the limitations of all but the '623 Patent. TPL contends that those chips were incorporated in Addonics products (among others). With respect to the '623 Patent, TPL contends that the products of its licensees Lenovo and Belkin practice that patent. The technical prong products and the claims that they are alleged to practice are listed in the chart below.

DOMESTIC INDUSTRY PRODUCTS						
Model Number	3443	3424	3549	3847	3638	3623
Addonics ADPMAF-X	Cl. 9	Cl. 25	Cl. 11			
Addonics AEPDDESU-WP				Cl. 1		
Addonics AEIDESAU-WP					Cl. 13	
Lenovo H320-4041-1JU						Cl. 1
Belkin PM00525-A						Cl. 1

## II. IMPORTATION OR SALE

Section 337 of the Tariff Act prohibits the importation into the United States, the sale for importation, or the sale within the United States after importation by the owner, importer, or consignees of articles that infringe a valid and enforceable United States patent. *See* 19 U.S.C. § 1337(a)(1)(B). A complainant “need only prove importation of a single accused product to satisfy the importation element.” *Certain Purple Protective Gloves*, 337-TA-500, Order No. 17 (September 23, 2004).

TPL has entered into stipulations regarding importation with respondents HP, Dell, and Kingston. (*See* JX-0087, JX-0088, and JX-0089.) Acer, Brother, Newegg-Rosewill, and Seiko Epson do not contest TPL’s allegations regarding importation. Only Canon and HiTi assert that TPL has failed to prove that they meet the importation requirement. (RIB at 253-256.)

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As for Acer, Brother, Newegg-Rosewill, and Seiko Epson, the ALJ finds that TPL presented sufficient evidence to establish that these companies meet the importation requirement of Section 337. (CX-0940C at Q/A 6-12; CX-0132C, CX-0136 (Acer); CX-0141C (Brother); CX-0224 (Newegg-Rosewill); CX-0234C (Seiko Epson).) Accordingly, the ALJ finds that Acer, Brother, Newegg-Rosewill, and Seiko Epson meet the importation requirement of Section 337.

As for Canon and HiTi, they admit that at least one of all of the accused products have been imported into the United States, but they argue that TPL failed to present any evidence that the specific entities TPL named—Canon, Inc. and HiTi Digital, Inc.—are responsible for importation of products into the United States. (RIB at 253-256.) Canon and HiTi argue that while TPL did ask in interrogatories “Identify, by model name and/or number, all Accused Products that you sell in the United States...” and each of them responded to this interrogatory identifying products, TPL never asked for clarification of either Canon’s or HiTi’s objections. (RIB at 256.)

The ALJ finds Canon and HiTi’s arguments unpersuasive. As an initial matter, TPL “need only prove importation of a single accused product to satisfy the importation element.” *Certain Purple Protective Gloves*, 337-TA-500, Order No. 17 (September 23, 2004). Here, there is no dispute that accused products have been imported into the United States. The presence of a single one of those accused products in the United States clearly satisfies the importation requirement. Moreover, it does not matter whether HiTi Digital, Inc. or Canon, Inc. themselves have imported the products. The statute specifically states “importation into the United States, the sale for importation, or the sale within the United States after importation by “the owner, importer, or consignee, of articles” is prohibited. 19 U.S.C. § 1337(a)(1)(B). Neither HiTi Digital, Inc. or Canon, Inc. argue that the accused product was not imported by an “owner,

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importer, or consignee” of the accused product. Moreover, even assuming such an argument were to be made, the importation requirement would still be satisfied since the accused product itself is in the United States and subject to the Commission’s *in rem* jurisdiction. *Sealed Air Corp. v. United States Int’l Trade Comm’n*, 645 F.2d 976, 985 (C.C.P.A. 1981). Indeed, to follow HiTi Digital, Inc. and Canon, Inc.’s arguments to its logical conclusion, the Commission could never issue a general exclusion order as it would be necessary for the party “responsible” for importation to be named a party to the investigation.

Beginning with HiTi, the ALJ finds its arguments fall short of the standard that the ALJ expects of attorneys appearing before the Commission. To begin with, this defense appears to have never been raised or preserved. While HiTi’s denies that it has “engaged in any unfair acts, including the alleged unlawful importation into the United States, the alleged unlawful sale for importation, and/or the alleged unlawful sale within the United States after importation” of the accused products in its Answer to the Complainant, its response also admits that it manufactures the products at issue that are indisputably being imported into the United States. (HiTi Response to the Complaint at ¶145.) Assuming that the conflicting answers in its Response to the Complaint was sufficient to preserve this importation argument, the ALJ still finds that HiTi never preserved this defense in its discovery responses or its pre-hearing brief. In response to TPL’s interrogatory asking HiTi to “Identify . . . all of the Accused Products you sell in the United States,” HiTi identified English language user manuals for various products. (RIB at 256 n.30.) HiTi claims, however, that because it objected, in the general objections section, that the definition of “you” was overly broad, TPL should have known that this response to this interrogatory was not an admission that it was importing these products. In a footnote in the post-hearing brief, HiTi explains that its response included affiliates over which it has little

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control and TPL should have understood that. (RIB at 256 n.30.) However, HiTi never made such an assertion in its interrogatory response. The ALJ will not allow HiTi to amend its interrogatory responses through a footnote in its post-hearing brief. Thus, the ALJ finds that HiTi has admitted that it meets the importation requirement in its response to TPL's interrogatories.

If HiTi's two previous forfeitures of this argument were not enough, HiTi's discussion of its importation argument in its pre-hearing statement is equally vague. In that submission, HiTi stated in a footnote that it was contesting "personal jurisdiction." (RRB at 105 (citing RPHS at 3 n.1).) HiTi argues that based on this footnote "HiTi squarely contested importation in its pre-hearing brief." (RRB at 105.) The ALJ does not agree with HiTi that its reference to personal jurisdiction in a footnote "squarely raised" the issue of importation. Moreover, there is no mention of importation in the pre-hearing brief, only this footnote in the pre-hearing statement. If such vague allusions were allowed to preserve arguments, Section 337 investigations would descend (further) into a morass of gamesmanship and sandbagging. If HiTi believed it had a legitimate argument regarding importation, it must maintain that argument clearly and unambiguously. (Ground Rule 8.1.)

With HiTi's efforts to rewrite its discovery responses cast aside, the ALJ finds that TPL has presented evidence that HiTi meets the importation requirement. TPL presented interrogatory responses where HiTi identified the accused products it was selling in the United States. (CX-0202.003.) Also, TPL presented evidence that TPL purchased the accused HiTi products in the United States. (CX-0940C at Q&A 6-12.) Accordingly, the ALJ finds that TPL has presented sufficient evidence to demonstrate that HiTi meets the importation requirement.

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Canon presents a more difficult case. It is beyond dispute that the accused Canon products are imported into the United States. The question is whether Canon, Inc. is responsible for that importation or sale after importation. However, some cases have stated that “[w]ith regard to sale for importation, the requisite nexus exists when a respondent that sold infringing articles knew or should have known that those articles would be subsequently exported to the United States.” *See Certain Inkjet Ink Cartridges with Printheads & Components Thereof*, Inv. No. 337-TA-723, Final Initial Determination, at 8 (January 28, 2011). Under this standard, the ALJ finds that TPL has proved that the requisite nexus exists between Canon, Inc. and the importation. There is no dispute that the accused products were imported into the United States and that this importation was done by Canon’s subsidiaries and affiliates. (*See* CX-0152C, Canon’s First Supplemental Response to TPL’s First Set of Interrogatories at Supplemental Response to No. 1; CX-0940C at Q&A 6-12; CX-151; RRB at 104.) Thus, the ALJ finds that TPL has proven by a preponderance of the evidence that Canon meets the importation requirement.

**III. JURISDICTION**

In order to have the power to decide a case, a court or agency must have both subject matter jurisdiction and jurisdiction over either the parties or the property involved. *See Certain Steel Rod Treating Apparatus and Components Thereof*, Inv. No. 337-TA-97, Commission Memorandum Opinion, 215 U.S.P.Q. 229, 231 (1981). For the reasons discussed below, the ALJ finds the Commission has jurisdiction over this investigation.

Section 337 declares unlawful the importation, the sale for importation, or the sale after importation into the United States of articles that infringe a valid and enforceable United States patent by the owner, importer, or consignee of the articles, if an industry relating to the articles



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protected by the patent exists or is in the process of being established in the United States. *See* 19 U.S.C. §§ 1337(a)(1)(B)(I) and (a)(2). Pursuant to Section 337, the Commission shall investigate alleged violations of the Section and hear and decide actions involving those alleged violations.

As set forth *supra* in Section II, TPL has met the importation requirement. Furthermore, Respondents do not dispute that the Commission has *in personam* and *in rem* jurisdiction. (RIB at 16.) The Respondents have appeared at the hearing. Accordingly, the ALJ finds that Respondents have submitted to the jurisdiction of the Commission. *See Certain Miniature Hacksaws*, Inv. No. 337-TA-237, Pub. No. 1948, Initial Determination at 4, 1986 WL 379287 (U.S.I.T.C., October 15, 1986) (unreviewed by Commission in relevant part).

**IV. CLAIM CONSTRUCTION**

On October 4, 2012, the ALJ issued *Order No. 23: Construing the Terms of the Asserted Claims of the Patent at Issue*. Order No. 23 is incorporated herein in its entirety.

**V. INFRINGEMENT DETERMINATION****A. Applicable Law**

In a Section 337 investigation, the complainant bears the burden of proving infringement of the asserted patent claims by a preponderance of the evidence. *Certain Flooring Products*, Inv. No. 337-TA-443, Commission Notice of Final Determination of No Violation of Section 337, 2002 WL 448690 at 59, (March 22, 2002); *Enercon GmbH v. Int'l Trade Comm'n*, 151 F.3d 1376 (Fed. Cir. 1998).

Each patent claim element or limitation is considered material and essential. *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1538 (Fed. Cir. 1991). Literal infringement of a claim occurs when every limitation recited in the claim appears in the accused device, *i.e.*, when the



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properly construed claim reads on the accused device exactly. *Amhil Enters., Ltd. v. Wawa, Inc.*, 81 F.3d 1554, 1562 (Fed. Cir. 1996); *Southwall Tech. v. Cardinal IG Co.*, 54 F.3d 1570, 1575 (Fed Cir. 1995).

If the accused product does not literally infringe the patent claim, infringement might be found under the doctrine of equivalents. The Supreme Court has described the essential inquiry of the doctrine of equivalents analysis in terms of whether the accused product or process contains elements identical or equivalent to each claimed element of the patented invention. *Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 40 (1997).

Under the doctrine of equivalents, infringement may be found if the accused product or process performs substantially the same function in substantially the same way to obtain substantially the same result. *Valmont Indus., Inc. v. Reinke Mfg. Co.*, 983 F.2d 1039, 1043 (Fed. Cir. 1993). The doctrine of equivalents does not allow claim limitations to be ignored. Evidence must be presented on a limitation-by-limitation basis, and not for the invention as a whole. *Warner-Jenkinson*, 520 U.S. at 29; *Hughes Aircraft Co. v. U.S.*, 86 F.3d 1566 (Fed. Cir. 1996). Thus, if an element is missing or not satisfied, infringement cannot be found under the doctrine of equivalents as a matter of law. See, e.g., *Wright Medical*, 122 F.3d 1440, 1444 (Fed. Cir. 1997); *Dolly, Inc. v. Spalding & Evenflo Cos., Inc.*, 16 F.3d 394, 398 (Fed. Cir. 1994); *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1538-39 (Fed. Cir. 1991); *Becton Dickinson and Co. v. C.R. Bard, Inc.*, 922 F.2d 792, 798 (Fed. Cir. 1990).

The concept of equivalency cannot embrace a structure that is specifically excluded from the scope of the claims. *Athletic Alternatives v. Prince Mfg., Inc.*, 73 F.3d 1573, 1581 (Fed. Cir. 1996). In applying the doctrine of equivalents, the Commission must be informed by the fundamental principle that a patent's claims define the limits of its protection. See *Charles*

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*Greiner & Co. v. Mari-Med. Mfg., Inc.*, 92 F.2d 1031, 1036 (Fed. Cir. 1992). As the Supreme Court has affirmed:

Each element contained in a patent claim is deemed material to defining the scope of the patented invention, and thus the doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole. It is important to ensure that the application of the doctrine, even as to an individual element, is not allowed such broad play as to effectively eliminate that element in its entirety.

*Warner-Jenkinson*, 520 U.S. at 29.

The Federal Circuit has recently clarified the vitiation limitation on the doctrine of equivalents in *Deere & Co. v. Bush Hog, LLC*, 703 F.3d 1349 (Fed. Cir. 2012):

“Vitiation” is not an exception to the doctrine of equivalents, but instead a legal determination that “the evidence is such that no reasonable jury could determine two elements to be equivalent.” The proper inquiry for the court is to apply the doctrine of equivalents, asking whether an asserted equivalent represents an “insubstantial difference” from the claimed element, or “whether the substitute element matches the function, way, and result of the claimed element.” If no reasonable jury could find equivalence, then the court must grant summary judgment of no infringement under the doctrine of equivalents.

*Id.* at 1356 (citations omitted). The vitiation concept has its clearest application “where the accused device contain[s] the antithesis of the claimed structure.” *Planet Bingo, LLC v. GameTech Int’l, Inc.*, 472 F.3d 1338, 1345 (Fed. Cir. 2006). As the Federal Circuit explained in *Deere*, “[c]ourts should be cautious not to shortcut this inquiry by identifying a ‘binary’ choice in which an element is either present or ‘not present.’ Stated otherwise, the vitiation test cannot be satisfied by simply noting that an element is missing from the claimed structure or process because the doctrine of equivalents, by definition, recognizes that an element is missing that must be supplied by the equivalent substitute.” *Deere*, 703 F.3d at 1356–57. The Federal Circuit has further clarified that:

The vitiation test cannot be satisfied merely by noting that the equivalent substitute is outside the claimed limitation’s literal scope. Rather, vitiation applies when one of skill in the art would understand that the literal and substitute limitations are not interchangeable, not insubstantially different, and when they do

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not perform substantially the same function in substantially the same way, to accomplish substantially the same result. In short, saying that a claim element would be vitiated is akin to saying that there is no equivalent to the claim element in the accused device based on the well-established “function-way-result” or “insubstantial differences” tests.

*Brilliant Instruments, Inc. v. GuideTech, LLC*, 707 F.3d 1342, 1347 (Fed. Cir. 2013).

Prosecution history estoppel may bar the patentee from asserting equivalents if the scope of the claims has been narrowed by amendment during prosecution. A narrowing amendment may occur when either a preexisting claim limitation is narrowed by amendment, or a new claim limitation is added by amendment. These decisions make no distinction between the narrowing of a preexisting limitation and the addition of a new limitation. Either amendment will give rise to a presumptive estoppel if made for a reason related to patentability. *Honeywell Int’l Inc. v. Hamilton Sundstrand Corp.*, 370 F.3d 1131, 1139-41 (Fed. Cir. 2004), *cert. denied*, 545 U.S. 1127 (2005)(citing *Warner-Jenkinson*, 520 U.S. at 22, 33-34; and *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 733-34, 741 (2002)). The presumption of estoppel may be rebutted if the patentee can demonstrate that: (1) the alleged equivalent would have been unforeseeable at the time the narrowing amendment was made; (2) the rationale underlying the narrowing amendment bore no more than a tangential relation to the equivalent at issue; or (3) there was some other reason suggesting that the patentee could not reasonably have been expected to have described the alleged equivalent. *Honeywell*, 370 F.3d at 1140 (citing, *inter alia*, *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 344 F.3d 1359 (Fed. Cir. 2003)(*en banc*)). “Generalized testimony as to the overall similarity between the claims and the accused infringer’s product or process will not suffice [to prove infringement under the doctrine of equivalents].” *Tex. Instruments, Inc. v. Cypress Semiconductor Corp.*, 90 F.3d 1558, 1567 (Fed. Cir. 1996).

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To prove direct infringement, TPL must prove by a preponderance of the evidence that each of the accused products either literally infringe or infringe under the doctrine of equivalents the asserted claims of the asserted patents. *Advanced Cardiovascular Sys., Inc. v. Scimed Life Sys., Inc.*, 261 F.3d 1329, 1336 (Fed. Cir. 2001).

A party can also indirectly infringe a patent. To prevail on a claim for indirect infringement, a patentee must first demonstrate direct infringement, and then establish that the “defendant possessed the requisite knowledge or intent to be held vicariously liable.” *Dynacore Holdings Corp. v. U.S. Philips Corp.*, 363 F.3d 1263, 1272–73 (Fed. Cir. 2004). The knowledge requirement must be met by a showing of either actual knowledge or willful blindness. *Global-Tech Appliances, Inc. v. SEB S.A.*, — U.S. —, 131 S. Ct. 2060, 2068 (2011).

Under 35 U.S.C. § 271(b), “[w]hoever actively induces infringement of a patent shall be liable as an infringer.” “To prove induced infringement, the patentee must show direct infringement, and that the alleged infringer knowingly induced infringement and possessed specific intent to encourage another’s infringement.” *Toshiba Corp. v. Imation Corp.*, 681 F.3d 1358, 1363 (Fed. Cir. 2012) (internal quotations omitted).

The Supreme Court has held that “induced infringement under § 271(b) requires knowledge that the induced acts constitute patent infringement.” *Global-Tech*, 131 S. Ct. at 2070. In so holding, the Supreme Court rejected the Federal Circuit’s “deliberate indifference” to a “known risk” test. *Id.* at 2071. It explained that the “knowledge” required under § 271(b) could be satisfied by a showing of actual knowledge or “willful blindness.” *Id.* at 2068–71. The Supreme Court explained that a defendant acts with willful blindness if she “subjectively believe[s] that there is a high probability that a fact exists” and “take[s] deliberate actions to avoid learning of the fact.” *Id.* at 2070, 2070 n.9. In contrast, a defendant who “merely knows

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of a substantial and unjustified risk of [ ] wrongdoing” acts recklessly, and a defendant who “should have known of a similar risk, but in fact, did not” acts negligently. *Id.* at 2071. “Inducement requires evidence of culpable conduct, directed to encouraging another’s infringement, not merely that the inducer had knowledge of the direct infringer’s activities.” *DSU Med. Corp. v. JMS Co.*, 471 F.3d 1293, 1306 (Fed. Cir. 2006) (*en banc*).

Under 35 U.S.C. § 271(c), “[w]hoever offers to sell or sells within the United States or imports into the United States a component of a patented machine, manufacture, combination, or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be specifically made to or specially adapted for use in the infringement of the patent, and not a staple article or commodity suitable for substantial non-infringing use, shall be liable as a contributory infringer.” “Contributory infringement imposes liability on one who embodies in a non-staple device the heart of a patented process and supplies the device to others to complete the process and appropriate the benefit of the patented invention.” *Vita-Mix Corp. v. Basic Holding, Inc.*, 581 F.3d 1317, 1327 (Fed. Cir. 2009). To state a claim for contributory infringement, an infringer must sell, offer to sell or import into the United States a component of an infringing product “knowing [the component] to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial non infringing use.” 35 U.S.C. § 271(c); *see Lucent Techs. v. Gateway, Inc.*, 580 F.3d 1301, 1320 (Fed. Cir. 2009). As with induced infringement, a claim for contributory infringement must also contain allegations of the requisite knowledge of the patent-in-suit at the time of infringement. *Global-Tech*, 131 S. Ct. at 2068. In addition, the patentee bears the burden of proving that the accused

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products have no substantial non-infringing uses. *See Golden Blount, Inc. v. Robert H. Peterson Co.*, 438 F.3d 1354, 1363 (Fed. Cir. 2006).

A seller of a component of an infringing product can also be held liable for contributory infringement if: (1) there is an act of direct infringement by another person; (2) the accused contributory infringer knows its component is included in a combination that is both patented and infringing; and (3) there are no substantial non-infringing uses for the accused component, *i.e.*, the component is not a staple article of commerce. *Carborundum Co. v. Molten Equip. Innovations, Inc.*, 72 F.3d 872, 876 (Fed. Cir. 1995).

**B. The '443, '424, and '847 Patents**

**1. Respondents Products Do Not Practice "Mapping" as Claimed**

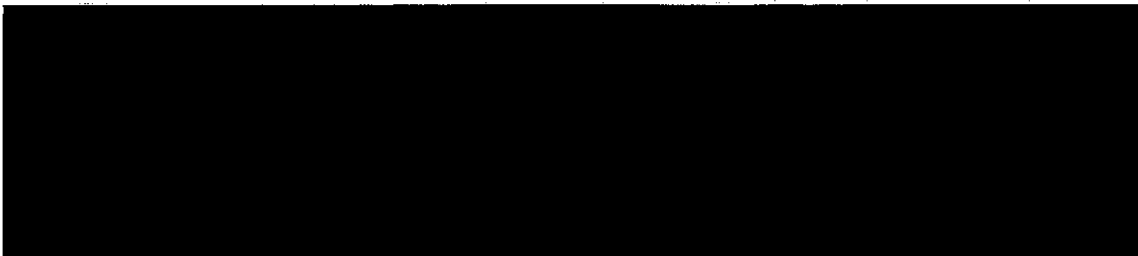
Respondents argue that their products do not have a "controller to map" or a "means for mapping..." as identified in the claims. (RJB at 62.) Respondents note that all of the asserted claims of the '443, '424, and '847 Patents contain a mapping requirement. The elements in dispute as:

- a controller chip to map at least a subset of the at least one set of contact pins to a set of signal lines or power lines, based on an identified type of a memory media card. ('443 Patent at Claims 1, 3, 4, 7.)
- "a controller integrated into the multi-memory media adapter to map at least a subset of the set of contact pins to a set of signal lines or power lines, based an identified type of the memory media card" ('443 Patent at Claims 9, 11, 12, 14.)
- "means for mapping power, ground or data signals between said interconnection pins and said one or more contact pins depending upon the identification of the type of memory card inserted into said port" ('424 Patent at Claims 25, 26, 28, 29.)
- "means for mapping power, ground or data signals between said signal lines and said contact pins depending upon the identification of the type of memory card inserted into said port; wherein the means for mapping comprises a controller" ('847 Patent at Claim 1-3.)

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TPL asserts that these elements because Respondents products contain a controller that according to TPL maps at least one of contact pins to a set of signal lines or power lines based on whether the identified type of memory card is SD or MMC. (*See, e.g.*, CIB at 67.) Some background on the products will help make the parties' arguments comprehensible.

It is undisputed that the controllers in the accused SD/MMC readers have signal lines that connect the controller to the "contact pins"<sup>2</sup> on the SD/MMC readers. For the sake of this discussion, the ALJ refers to the accused HP Photosmart 55100 printer. The HP Photosmart 55100 has a memory card reader that can read SD and MMC cards. This memory card reader includes a memory card connector into which the user inserts the memory card, an ASIC, and signal lines that connect the ASIC to the memory card connector. Shown below for representative purposes is a schematic of the ASIC and connector. The ASIC controller's pins



(CIB at 67 (citing CX-320C.1; CX-944C at Q/A1022-1023.)



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<sup>2</sup> For purposes of this discussion the ALJ is not finding that these are "contact pins" or "interconnection means" within the meaning of the patent. The ALJ is simply using this terminology to discuss the alleged mapping.

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[REDACTED] (CIB at 68.) TPL contends that

[REDACTED]

[REDACTED] The ALJ will assume that they are such for the sake of this discussion. Once again, the names and order of these points on the alleged interconnection pins or means will vary based on the specific controller used in the accused products.

[REDACTED]

(CIB at 68 (citing CX-320C.4; CX-944C at Q/A1022-1023.)

It is undisputed that the table below shows the [REDACTED]

[REDACTED]

[REDACTED]

(CX-296C.27; CX-944C at QA1022-1023.) It is further undisputed the table below shows the

[REDACTED]



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(CX-354C.18; CX-944C at QA1022-1023.)

It is further undisputed between the parties about how the products operate and for purposes of the discussion of this element at this level of generality, that they operate in relatively a similar way. For example, in the HP Photosmart, TPL explains that:

[W]hen an SD card is utilized, contact pins 7, 8, 9 and 1 are associated with signals DAT0, DAT 1, DAT2, and DAT3 (for 4-bit data transfer). When an MMC card is inserted, contact pin 7 is associated with a DAT signal (for 1-bit data transfer) and contact pins 8, 9, and 1 are not utilized. This is because SD cards operating in SD Mode operate in 4-bit mode and MMC cards operate in 1-bit mode. Taking the above evidence, the following tables summarize how at least a subset of the set of contact pins are mapped to a set of signal lines based on whether the identified type of memory card is SD or MMC.

[REDACTED]		
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]		
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

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(CIB at 69-70.)

Thus, TPL argues that the controller in the accused products maps contact pins 7, 8, 9, 1, 2, and 5 to signal lines [REDACTED] respectively, if the identified type of card is SD (for 4-bit data mode). However, only contact pins 7, 1, 2, and 5 are mapped to signal lines [REDACTED] respectively, if the identified type of card is MMC (for 1-bit data mode). (CIB at 70.)

Respondents argue that this is simply not “mapping” within the meaning of claims. First, Respondents argue that the claims require that “‘mapping’ must occur between between between disparate physical structures—contact pins at one two physical elements—the interconnection pins/means or signal/power lines at the other end.” (RIB at 62.) Second, Respondents argue that “mapping” cannot simply mean a pre-selected, fixed assignment of contact pins to signal/power lines or interconnection pins/means because a fixed assignment of contact pins is contrary to the plain language of the claims. (RIB at 62-63.) Respondents argue that the ability of a card reader

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to accommodate and distinguish between SD cards and MMC cards is nothing more than a fixed assignment of pins. (RIB at 63.) The ALJ considers each in turn.

TPL argues that mapping signals does not require the controller physically fix and un-fix different contact pins to different signals or interconnection pins/means. TPL asserts that this theory would require the controller be somehow located between the contact pins and signal lines which TPL contends makes no sense in the context of these patents.

The ALJ agrees that the accused products do not perform “mapping” within the meaning of the claim elements of the ’443, ’424, and ’847 Patents, but not for all the reasons that Respondents provide. The ALJ would first like to finally lay to rest Respondents’ “physically between” arguments. Respondents have built an edifice of various convoluted arguments on a brief discussion in the ALJ’s claim construction, while ignoring any other contrary discussion in the same claim construction order. The discussion in question is from the ALJ’s construction of the terms “contact pins” and “interconnection means”:

The claim language in both the ’424 Patent and the ’847 Patent also support such a construction. Claims 25 and 28 clearly indicate that the “interconnection means” is a “separate and distinct” structure from the connection pin. Claims 25 and 28 require a “means for mapping” between “interconnection pins/means” and contact pins. (’424 Patent claim 25 and 28.) Thus, in order to map signals between “interconnection pins/means” and contact pins, “interconnection pins/means” and contact pins must be separate and distinct structures. Similarly, claim 1 of the ’847 Patent claims an “interconnection means” that “connect[s] said signal lines to one or more contact pins.”

Order No. 23 at 20.

In this discussion, the ALJ was attempting to decide the parties’ claim construction dispute about whether the “contact pins” and “interconnection means” had to be separate structures or could be the same structure. (See Order No. 23 at 18-20 (laying out the dispute between the parties). This discussion was not directed at whether mapping requires connecting

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or creating paths between different physical structures or not. Indeed, this claim construction dispute has matured into the lengthy infringement dispute between the parties as to whether structures that TPL has identified as the “contact pins” and “interconnection means” are separate structures or not. (*See* RIB at 53-63.) The ALJ was not seeking to resolve anything more than that claim construction dispute. The ALJ was simply noting that the claim language describes these two things — the contact pins and interconnection means — as distinct things, which supported the argument that the contact pins and interconnection means were could not be the same thing as TPL was arguing, without rendering the claim language superfluous.

The ALJ was not deciding through that brief paragraph whether the claim imposes any physical requirements on mapping. Indeed, the ALJ dealt (and thought he had resolved) the parties’ disputes regarding whether mapping required altering physical connections in another part of Order No. 23:

Respondents appear to concede that the mapping is a logical function and does not require some physical connection be changed in the device in order to accomplish it. Thus, TPL’s concerns that the phrase “selectively connecting” will be used by Respondents to argue that the controller must physically connect the contact pins to different signal lines is also without foundation.

Order No. 23 at 29.

Now, Respondents seek impose a requirement that “[m]apping” as disclosed and claimed in the ’443, ’424, and ’847 Patents, involves establishing a physical or logical connection between physical point ‘A’ (*i.e.*, ‘contact pins’) and physical point ‘B’ (*i.e.*, interconnection pins/means’ or ‘signal/power lines’).” (RIB at 63.) The ALJ notes that by including the words “logical connection”, Respondents appear to be an attempt to harmonize this argument with their concession at the Markman stage that they wouldn’t require a physical connection be changed for mapping to occur. However, the ALJ has no idea how one creates a logical connection or path between two physical points for a signal (which is another physical thing) to travel. The

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testimony of Mr. McAlexander that Respondents offer (RIB at 63) on this point is incomprehensible. It seems to use logical path and physical path the same way:

And so you have separate, distinct, identifiable, separated isolated structures, in this case at least one set of contact pins on one side and a set of signal lines or power lines on the other. And "to map" means to interconnect, to create a map between these two sets of disparate or different sets of structures, such as the contact pins and the power lines. So "to map" is to create the path. It's to identify the path. Now, that path can be physical, it can be logical. But there has to be a connectivity, has to be a path that's established. And that's what mapping is.

(Tr. 1471:18-1427:7.)

What does make sense to the ALJ is making a logical connection between physical points and some other data. For example, a logical connection can be made between a fixed electrical path and the identity of the signal that travels along that path. This is what is shown in Figures 4 and 5 of the patent. Thus, as those figures demonstrate, if an xD card is inserted, the controller knows that signal on contact pin 10 is the D0 signal and can map or logically associate the identity of that signal to that contact pin.

The ALJ finds, however, that this logical pathway leads to a point that TPL conceded: there cannot be fixed logical assignments of signals. (Order No. 23 at 29.) And on this point, Respondents raise an excellent and coherent argument: that the accused products cannot infringe because the logical assignments for the various contact pins is never mapped and is fixed. (RIB at 72-79.) The ALJ agrees.

Respondents argue that SD and MMC cards have compatible pin configurations, and the SD Specifications were drafted such that a single set of contact pins can accept both card types without the need to perform the "mapping" required for incompatible pin configurations. (RIB at 72.) Respondents assert that the ability of a card reader to distinguish between SD cards and MMC cards [REDACTED]

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[REDACTED] and thus neither of these processes can constitute the claimed "mapping" of the '443, '424, or '847 Patents.

The ALJ finds that as can be seen above in the Figures [REDACTED]

[REDACTED] (CX-354C.18; CX-296C.27.) [REDACTED]

[REDACTED] (*Id.*; RX-2888C at Q/A 82, 164; RX-2885C at Q/A 59, RX-2369.0019; JX-0068.0019.) The only difference between the cards is that the data in the SD card is four bit bus, which requires four pins for data, and the MMC card only requires one. (RX-2369.0019; RDX-0482.) [REDACTED]

[REDACTED] (RX-2888C, Q/A 56-60, 160-79; RX-22369.0019-20; JX-0068.0019-20; RDX-0412; RDX-0480; RDX-0481.)

SUBJECT TO PROTECTIVE ORDER

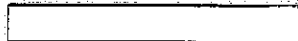
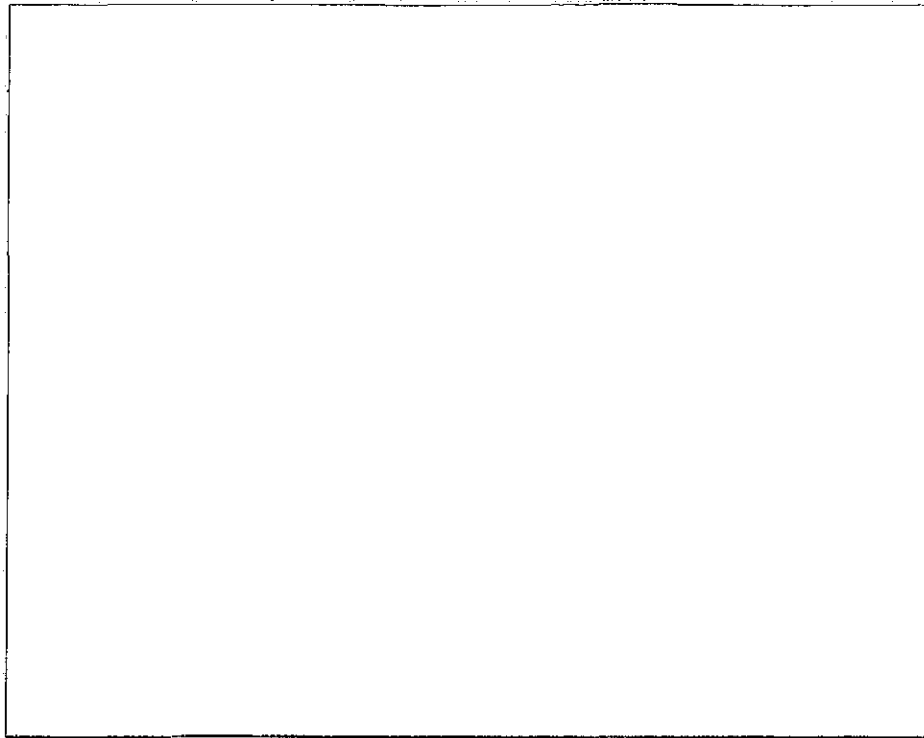


As Dr. Mercer explained, when the SD card is inserted the compatibility between the SD and MMC cards allows the controller to begin communication with the inserted card, performing card initialization (*i.e.*, hand shaking) and data transfer without the need for “mapping.” (RX-2888C at Q/A 172; RDX-0484 through RDX-0488.) Therefore, the ALJ finds that a card reader does not need to perform the claimed mapping” to accommodate SD and MMC card types in the same slot. (RX-2888C, Q/A 56-60; RDX-0412.)

**Figure 19 (RDX-0412)**

The SD Specifications describe the initialization process as follows:

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The ALJ finds that when a card is inserted into a card reader, the SD Specifications

[REDACTED]

[REDACTED] (RX-2888C, Q/A 170-76.) As shown in RDX-0487, [REDACTED]

[REDACTED] (RX-2888C, Q/A 175; RDX-0487.) However, [REDACTED]

[REDACTED] (Id.) After the card type is identified, [REDACTED]

[REDACTED] (RX-2888C, Q/A 177-79.) However, as Dr. Mercer explains, [REDACTED]



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[REDACTED] (Buscaino, Tr. 538:16-539:4.)

The ALJ finds that Mr. Berg explained that distinguishing between an SD and MMC cards does not show evidence of the claimed “mapping” because, the evidence only shows that

[REDACTED] (RX-2885C, Q/A 81-92; *see also id.* at Q/A 103-05, 110, 112-13, 119-21 (as to Acer).)

Specifically, the ALJ finds that a communication with an MMC card and communication with an SD card occurs across a 1-bit wide data bus. (*Id.* at 87.) The ALJ finds that Mr. Buscaino provided no evidence that any device ever operates using a data bus wider than 1-bit when an SD card is inserted, and Mr. Berg explained that such functionality is optional. (*Id.* at 88, 91-92.) Thus, although the ALJ notes that TPL’s arguments regarding mapping were eminently reasonable, the ALJ finds that they have not proven that the “mapping” elements found in all the asserted claims of the ’443, ’424, and ’847 Patents. Accordingly, the ALJ finds that because TPL has failed to prove the presence of all of the elements of the asserted claims, TPL has failed to prove infringement of the asserted claims of the ’443, ’424, and ’847 Patents.

## **2. Respondents’ Products Which Support Only One Memory Card Type Do Not Infringe**

Respondents contend that under the ALJ’s claim construction, the “mapping limitations of the asserted claims of the ’443, ’424, and ’847 Patents require that “at least some of the contact pins must be shared by different memory card types.” (RIB at 83 (quoting Order No. 23 at 31).) Respondents argue that certain Respondents have modified products in this investigation or added new products that do not read from or write to MMC memory cards. (RIB at 83.) Thus, the memory card adapters of these new and modified products only support one card type

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and do not infringe the asserted claims of the '443, '424, and '847 Patents. TPL does not dispute this point in its post hearing briefs.

The ALJ agrees with Respondents although other aspects of "mapping" are hotly disputed between the parties, it is essentially undisputed that card readers that can only support one type of memory card cannot infringe the asserted claims of the '443, '424, and '847 Patents. Indeed, Mr. Buscaino, conceded at the hearing that a product that reads SD only would not infringe the asserted claims of the '443, '424, and '847 Patents. (Tr. 574:14-22.) Accordingly, the ALJ finds that Respondents' products that include a memory card reader adapter that does not support MMC cards and only support SD cards, do not infringe the asserted claims.

### C. The '623 Patent

#### 1. Claim 1

TPL alleges that respondents Acer, Kingston, and Newegg/Rosewill infringe claim 1 of the '623 Patent. The three accused products include the Acer M3970, the Kingston FCR-HS219/1, and the Rosewill RCR-YJ-EX601 (collectively, "the Accused Products").

**a) "a plurality of memory card interfaces comprising a first subset to interface with a memory card of a first type and a second subset to interface with a memory card of a second type"**

TPL asserts that the presence of "a plurality of memory card interfaces comprising a first subset to interface with a memory card of a first type and a second subset to interface with a memory card of a second type," in the Acer M3970 is undisputed. (CIB at 175.) The Acer M3970 includes a plurality of memory card interfaces, which include a first subset to interface with a memory card of a first type, e.g., a subset to interface with a CompactFlash ("CF") card,

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and a second subset to interface with a Secure Digital (“SD”) or MultiMediaCard (“MMC”) type card. (*Id.*)

TPL also asserts that the Kingston FCR-HS219/1 includes the claimed plurality of memory card interfaces. (*Id.* at 182.) The interfaces of the Kingston FCR-HS219/1 include a first subset, which interfaces with a memory card of a first type, *e.g.*, a subset to interface with a CF card. (*Id.*) The Kingston FCR-HS219/1 also includes a second subset of interfaces, which interface with a SD or MMC type card. (*Id.*)

In addition, TPL argues that the Rosewill RCR-YJ-EX601 includes the claimed plurality of memory card interfaces. (*Id.* at 185-86.) The Rosewill RCR-YJ-EX601 includes a first subset of interfaces for memory cards of a first type, *e.g.*, an xD card, and a second subset of interfaces for memory cards of a second type, *e.g.*, SD or MMC cards. (*Id.*)

Respondents do not dispute the presence of “a plurality of memory card interfaces with a memory card of a first type and a second subset to interface with a memory card of a second type,” in the Accused Products. (*See generally* RIB at 220-26.) The evidence shows that the Accused Products include a first subset that interfaces with one type of memory card and a second subset that interfaces with a second type. (CX-0944C at Q&A 457-58, 1381-82, 1479-80.)

**b) “wherein the memory card of the first type and the memory card of the second type are accessible in parallel to transfer data from the memory card of the first type to the memory card of the second type”**

The only limitation in claim 1 of the '623 Patent that TPL and Respondents dispute is whether the Accused Products include “wherein the memory card of the first type and the memory card of the second type are accessible in parallel to transfer data from the memory card of the first type to the memory card of the second type.” (CIB at 175.) In the claim construction

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order issued on October 4, 2012, the ALJ found that the plain and ordinary meaning of “accessible in parallel” should apply. (Order No. 23 at 63.) In the order, the ALJ rejected Respondents’ proposal to interpret “accessible in parallel” as “each transmitting or receiving data simultaneously at a given point in time.” (*Id.* at 61.) The order also held that “to transfer from the memory card of the first type to the memory card of the second type” should be given its plain and ordinary meaning. (*Id.* at 69.)

TPL states that the Acer M3970 includes the claimed configuration of memory cards of a first and second type. (CIB at 175.) In the Acer M3970, when the CF and SD cards are inserted into the ports, the cards are accessible in parallel and data can be concurrently read from the CF memory card and written to the SD memory card in parallel. (*Id.*)

TPL also asserts that the Kingston FCR-HS219/1 includes the claimed configuration of memory cards of a first and second type. (*Id.* at 183.) When CF and SD cards are inserted into ports of the Kingston FCR-HS219/1, both the CF and SD cards are accessible in parallel and data can be concurrently read from a CF memory card and written to an SD memory card in parallel. (*Id.*)

In addition, TPL argues that the Rosewill RCR-YJ-EX601 includes the claimed configuration of memory cards of a first and second type. (*Id.* at 186.) When xD and SD cards are inserted into ports of the Rosewill RCR-YJ-EX601, both the xD and SD cards are accessible in parallel and data can be concurrently read from the xD memory card and written to the SD memory card. (*Id.*)

In response, Respondents believe the plain and ordinary meaning of “accessible in parallel” requires that the first and second memory cards can be accessed at the same time or during overlapping times. (RIB at 220.) This interpretation takes into account TPL’s expert’s

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statement that accessible and parallel data can be concurrently read from one type of card and written to another type of card. (*Id.*)

Respondents argue that TPL's expert, Mr. Buscaino, testified that the limitation is satisfied if the reading and writing of the cards "appears to be at the same time to the user," even if the cards cannot actually be accessed in parallel. (*Id.* at 221.) Respondents disagree that the claims can be interpreted this way because it defies the plain meaning of the claim limitation and conflicts with Respondents' expert, Dr. Wolfe, who testified that parallel requires doing two or more things at the exact same time. (*Id.* at 221-22.)

Respondents base their interpretation of "accessible in parallel" on a prior art reference raised during prosecution of the '623 Patent. (*Id.* at 222.) In the prosecution history, the '623 Patent was distinguished from U.S. Publication No. 2002/0178307 to Pua ("Pua"). (*Id.*) Pua does not teach or suggest that the memory cards may be accessible in parallel, but does teach memory cards accessed in sequence. (*Id.*) Therefore, claim 1 of the '623 Patent must require memory cards of a first and second type that can be accessed concurrently because this limitation was used to overcome the prior art reference Pua. (*Id.* at 223.)

Based on Respondents' interpretation of "accessible in parallel," Respondents believe the memory cards in the Accused Products cannot be accessed in parallel. (*Id.*) The first and second memory cards in the Accused Products use a controller chip that includes one or more switches. (*Id.* at 224.) Because of the switches, the card readers in the Accused Products can only be accessed one at a time. (*Id.*) Dr. Wolfe tracked and logged all disk and memory card activity during the file transfer operation using a Microsoft diagnostic tool. (*Id.* at 225.) According to the data gathered by Dr. Wolfe, the Accused Products were only accessed in sequence, *i.e.*, one at a time, rather than in parallel. (*Id.* at 223.)

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Respondents assert that the evidence presented by Mr. Buscaino is insufficient to show that the Accused Products are “accessible in parallel.” (RIB at 226.) Mr. Buscaino concluded that the memory cards were “accessible in parallel” because a file can be copied from one memory card to the other. (*Id.*) Respondents are unconvinced that the memory cards are “accessible in parallel” merely because data can be transferred from one memory card to another. (*Id.*) Mr. Buscaino’s evidence that memory cards are assigned a drive letter by Microsoft Windows is also unpersuasive because the assignment of drive letters only indicates the host computer is aware of the presence of each memory card, not that the memory cards are accessed “in parallel.” (*Id.*)

TPL responds by focusing on the ALJ’s claim construction. (*See* CRB at 86.) TPL explicitly cites from the claim construction order:

The ’623 Patent contains no requirement that each memory card in the invention will be transmitting or receiving data simultaneously at a given point in time . . . This language does not require that the cards function simultaneously, but rather that it be possible for them to be in their respective slots simultaneously, so the operator of the system can access them without taking them in and out.

(*Id.*; *see* Order No. 23 at 61.) In other words, the invention encompassed in the patent involves multiple memory cards in memory card interfaces simultaneously. (*Id.*) In addition, TPL states Respondents’ proposed construction requiring simultaneous access was expressly rejected by the ALJ. (*Id.*) TPL asserts that the evidence shows the Accused Products meet the “accessible in parallel” limitation. (*Id.* at 87.)

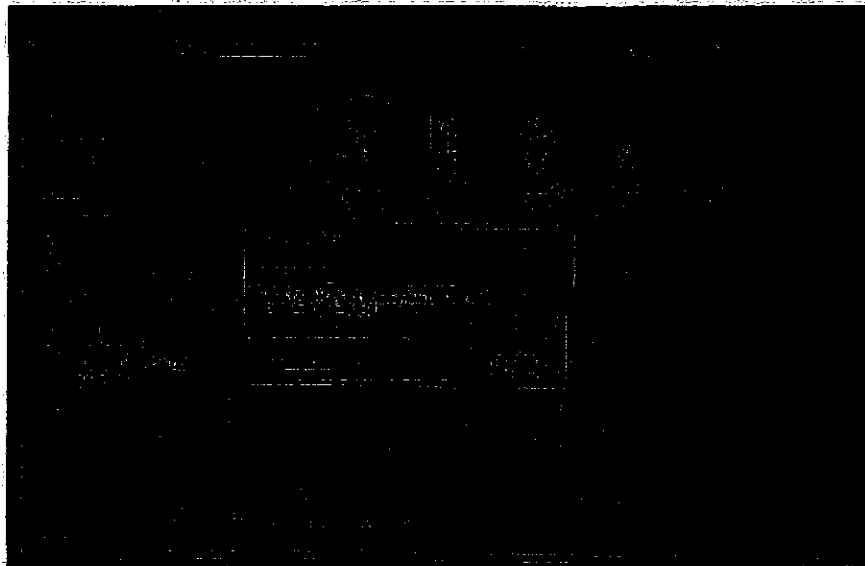
Respondents reply by arguing neither TPL nor Mr. Buscaino provide any evidence in that Respondents’ products practicing the parallel accessibility of the ’623 Patent. (RRB at 43.) TPL urges that the first and second memory cards are accessible in parallel in the Accused Products

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because data can be “concurrently” read from the first card and written to a second card, but TPL does not provide any evidence to support the assertion. (*Id.*)

The ALJ finds memory cards in the Accused Products are capable of being accessed in parallel based on his construction set forth in the *Markman* Order. (See CX-0944C at Q&A 460, 1384, 1482.) For each of the Accused Products, TPL provides a screen shot and explanation describing how each product is accessed in parallel. (*Id.* at Q&A 460, 1384, 1482.) Specifically, the screen shot shows files being transferred from the CF memory card in one memory port to an SD memory card in the second memory port:

Data can be concurrently read from the CF memory card (LUN0) and written to the to the SD memory card (LUN2). Both the CF and SD memory cards are accessible in parallel.



*As shown above, files from the CF memory card are copied to the SD memory card. Both the CF and SD memory cards are accessible in parallel and are capable of concurrent read/write access. See, e.g., CX-0472C (TPL1038499), (Photo from examination at TPL on October 1<sup>st</sup>, 2012, TPL200012).*

Therefore, a preponderance of the evidence shows the memory cards in the Accused Products can be accessed in parallel. (*Id.*)

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Many of Respondents' arguments focus on whether memory cards in the Accused Products are accessed in parallel. (*e.g.*, RIB at 220.) However, as the ALJ explained in the *Markman* order, TPL only needs to show memory cards in the Accused Products are *capable of* being accessed in parallel. (Order at 62.) In addition, Respondents' evidence shows that memory cards in the Accused Products are accessed in sequence, but that does not necessarily mean that the memory cards are incapable of being accessed in parallel. (*See* RX-2891 at Q&A 137-38, 156-57, 179-80.) Respondents' argument regarding Pua was already addressed and dismissed in the claim construction order. (Order at 61-62.) The claim construction order explained that the patent applicants indicated that the memory cards claimed in the '623 Patent "can be operated at a given point in time," not that they must be operated at the same time. (*Id.* at 62.)

Respondents argue that Mr. Buscaino testimony does not employ the plain and ordinary meaning of "in parallel." (Tr. 716:6-8 ("What I mean by 'concurrently' is that concurrent appears to be happening at the same time to the user, for example . . . . '[C]oncurrently' means that it's occurring at the same time and it's perceived to be happening at the same time.").) Based on the general description of "in parallel" in the '623 Patent, the ALJ finds Mr. Buscaino's interpretation captures the plain and ordinary meaning. (*See* JX-0001.0007.) The specification of the '623 Patent describes prior art requiring serial downloading of images from a digital camera to flash memory. (*Id.*) The specification also discloses an improvement over serial downloading involving a jukebox with interfaces for different memory card types, which can be accessed "on demand" or simultaneously. (*Id.*) Based on this intrinsic evidence, the memory cards must be able to be reached at the same time. (*Id.*) In the Accused Products, multiple



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memory cards can be inserted into memory card interfaces and, therefore, are accessible in parallel and capable of concurrently reading and writing. (CX-0944C at Q&A 460, 1384, 1482.)

Therefore, the ALJ finds that the Accused Products meet each and every limitation of claim 1.

**2. Claim 2**

Claim 2 of the '623 Patent includes the additional limitation "at least one of the memory card interfaces is configured to read a plurality of different memory card types." The parties do not dispute that the Accused Products include the claimed memory card interfaces. (CIB at 275, 183, 186; *see generally* RIB at 226.) TPL states that at least one of the memory card interfaces in the Acer M3970 is configured to read a plurality of different memory card types. (CIB at 175.) TPL also states that at least one of the memory card interfaces in the Kingston FCR-HS219/1 memory card interfaces is configured to read a plurality of different memory card types. (*Id.* at 183.) In addition, TPL asserts that at least one of the memory card interfaces in the Rosewill RCR-YJ-EX601 is configured to read a plurality of different memory card types, namely SD and MMC card types. (*Id.* at 186.)

The ALJ finds that the Accused Products meet the limitation of claim 2. (CX-0944C at Q&A 461-62, 1385-86, 1483-84.) Text adjacent to a memory card interface in each of the Accused Products indicates different types of memory cards can be used in that interface. (*Id.* at Q&A 461 ("SD MMC"), 1386 ("miniSD SD/MMC"), 1484 ("SD/SDHC/MMC/RSDMMC").)

Based on this text, the Accused Products include "at least one of the memory card interfaces is configured to read a plurality of different memory card types." (CX-0944C at Q&A 462, 1386, 1484.)

**PUBLIC VERSION****3. Claim 3**

Claim 3 of the '623 Patent includes the additional limitation "at least one of the memory card interfaces includes an indicator identifying a status of an operation for a respective memory reader." TPL and Respondents disagree about whether the Acer M3970 and the Rosewill RCR-YJ-EX601 include the claimed indicator of claim 3. (*See* CIB at 175, 186; RIB at 227.)

TPL argues that at least one of the memory card interfaces in the Acer M3970 includes an indicator identifying a status of operating for a respective memory card interface. (CIB at 175.) In addition, TPL states at least one of the memory card interfaces in the Rosewill RCR-YJ-EX601 includes an indicator identifying a status of operation for a respective memory card interface. (*Id.* at 186.) Both products include a light that flashes when data is being written onto a card. (*Id.* at 176, 186.)

Respondents counter that TPL has not provided any evidence showing that a single light on the Acer M3970 and the Rosewill RCR-YJ-EX601 identifies the status of an operation for a particular memory card interface or what the light indicates. (RIB at 227.) TPL replies by indicating Mr. Buscaino provided evidence that the Acer M3970 and the Rosewill RCR-YJ-EX601 include the indicator element per his witness statement. (CRB at 87.) Respondents argue that the evidence does not show a single light on the Acer M3970 and the Rosewill RCR-YJ-EX601 that identifies the status of operation for a particular interface or what the light indicates when lit. (RRB at 45-46.)

The ALJ finds that the Acer M3970 and the Rosewill RCR-YJ-EX601 include the claimed "at least one of the memory card interfaces includes an indicator identifying a status of an operation for a respective memory reader interface." (*See* CX-0944C at Q&A 463, 1485.)

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The evidence shows a light on both the Acer M3970 and the Rosewill RCR-YJ-EX601 and explains that a flashing light indicates data is being written onto a card. (*Id.* at Q&A 464-65, 1485-86; CX-0559C.)

Respondents argue that TPL did not proffer evidence showing a light identifies the status of an operation of a particular memory card interface or what the light indicates on the Acer M3970 and the Rosewill RCR-YJ-EX601. (RIB at 227; RRB at 45-46.) However, the evidence shows the lights indicating that data is written onto a memory card for the Acer M3970 and the Rosewill RCR-YJ-EX601. (CX-0944C at Q&A 466, 1488; CX-0559.) The light corresponds to the claimed indicator and a flashing light identifies the status of operation, in this case writing onto a memory card. (*Id.*)

Respondents also argue that a light is not provided for each slot; however, the claim language does not require an indicator for each memory card interface. (See RIB at 227; JX-0001.0009 (stating “*at least one of the memory card interfaces includes an indicator*” (emphasis added)).) Respondents also argue that there is no evidence that a single light identifies the status of an operation for a particular memory card interface. (RIB at 227.) Contrary to Respondents’ assertion, the claim language does not require that the indicator only identifies the status of a single interface. (See JX-0001.0009.) Respondents read additional limitations into the claim by requiring that the indicator only shows the status of operation for a single interface. (See *id.* (“[T]he memory card interface[] includes an indicator . . .”).) In addition, the evidence shows a light flashes when data is being written to a memory card. (CX-0944C at Q&A 466, 1488.) In other words, a light flashes to indicate a status of an operation where data is being written to a memory card. (*Id.* at Q&A 466, 1488.) For these reasons, Respondents arguments that the Acer M3970 and the Rosewill RCR-YJ-EX601 do not include the indicator of claim 3 are

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unpersuasive. Therefore, the ALJ finds that the Acer M3970 and the Rosewill RCR-YJ-EX601 meet the limitations of claim 3.

**4. Claim 4**

Claim 4 of the '623 Patent includes the additional limitation "the indicator includes a light indicating data is being written to a card in the respective memory card interface." This limitation is similar to that of claim 3. (Id.) TPL's and Respondents' arguments for claim 4 are nearly identical to those for claim 3.

Consequently, the ALJ's finding regarding the "indicator" element in claim 4 are consistent with the findings for claim 3. The ALJ finds that the Acer M3970 and the Rosewill RCR-YJ-EX601 include the claimed "the indicator includes a light indicating data is being written to a card in the respective memory card interface." (CX-0944C at Q&A 466, 1487-88.) The evidence shows lights on the Acer M3970 and the Rosewill RCR-YJ-EX601 and explains that a flashing light indicates data is being written onto a card. (Id. at Q&A 465-66, 1487-88; CX-0559C.) The ALJ also finds Respondents' arguments unpersuasive for the same reasons set forth for claim 3.

Therefore, the ALJ finds that the Acer M3970 and the Rosewill RCR-YJ-EX601 meet the limitations of claim 4.

**5. Claim 9**

Claim 9 is similar to claim 1, but adds "a control circuit" and "a bus coupled to the control circuit." (CIB at 176.)

TPL's and Respondents' arguments regarding "accessible in parallel" in claim 1 also apply to claim 9. (Id. at 175, 183, 186; RIB at 220.) For claim 9, TPL provides evidence of the additional limitations "a control circuit" and "a bus coupled to the control circuit" in the Accused

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Products. (CIB at 176.) Respondents do not challenge TPL's evidence showing the Accused Products meet the limitations "a control circuit" and "a bus coupled to the control circuit." (See generally RIB at 220-26.)

TPL states that the Acer M3970 includes a universal serial bus ("USB") connector connected to a BCM and a Realtek RTS5181 controller. (CIB at 176.) The Realtek RTS5181 controller corresponds to the claimed control circuit. (*Id.*) The USB connector corresponds to the claimed bus. (*Id.*) In addition, TPL states that the Kingston FCR-HS219/1 has a USB type A connector, or bus, that is connected to an ATech AFT655486JJ controller, or control circuit. (*Id.* at 183.) TPL also asserts that the Rosewill RCR-YJ-EX601 includes a USB type mini-B connector, or bus, connected to a Realtek RTS5130 controller, or control circuit. (*Id.* at 187.)

The ALJ finds that the evidence shows that the Accused Products include "a control circuit" and "a bus coupled to the control circuit." (CX-0944C at Q&A 467-70, 1387-90, 1489-92.) The evidence shows controllers mounted to the PCBs of the respective Accused Products. (*Id.* at Q&A 468, 1388, 1490.) The evidence also shows a bus coupled to said controller. (*Id.* at Q&A 470, 1390, 1491; CX-0473C; CX-0549C; CX-0557C.) Regarding the remaining limitations of claim 9, the ALJ's findings are the same as those for claim 1.

## **6. Claim 10**

Claim 10 of the '623 Patent includes the additional limitation "at least one of the memory card interfaces with a memory card of a first type and a second subset to interface with a memory card of a second type." This limitation of claim 10 is similar to that of claim 2. (JX-0001.0009.) As with claim 2, Respondents do not dispute that the Accused Product infringe claim 10. (See generally RIB at 226.)

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The ALJ finds that the Acer M3970 meets the limitations of claim 10 for the same reasons they meet the limitations of claim 2. (*See* CX-0944C at Q&A 461-62, 475-76.) Similarly, the ALJ finds the Kingston FCR-HS219/1 meets the limitations of claim 10 for the same reasons set forth for claim 2. (*See id.* at Q&A 1385-86, 1395-96.) In addition, for the same reasons the Rosewill RCR-YJ-EX601 meets the limitations of claim 2, the Rosewill RCR-YJ-EX601 also meets the limitations of claim 10. (*See id.* at Q&A 1483-84, 1497-98.) In summary, the ALJ finds that the Accused Products meet the limitations of claim 10.

## **7. Claim 11**

Claim 11 of the '623 Patent includes the additional limitation "at least one of the memory card interfaces includes an indicator identifying a status of an operation for a respective memory card interface." This additional limitation of claim 11 is similar to the additional limitation of claim 3. (JX-0001.0009.) TPL's and Respondents' arguments regarding the "indicator" element for claim 11 are similar to those for claim 3.

The ALJ's findings regarding the "indicator" element in claim 3 also apply to claim 11. The ALJ finds that the Acer M3970 and the Rosewill RCR-YJ-EX601 include the claimed "at least one of the memory card interfaces includes an indicator identifying a status of an operation for a respective memory card interface." (CX-0944C at Q&A 477-78, 1499-1500.) The evidence shows a light on both the Acer M3970 and the Rosewill RCR-YJ-EX601 and explains that a flashing light indicates data is being written onto a card. (*Id.* at Q&A 477-78, 1499-1500.) The ALJ also finds Respondents' arguments unpersuasive for the same reasons set forth for claim 3.

Therefore, the ALJ finds that the Acer M3970 and the Rosewill RCR-YJ-EX601 meet the limitations of claim 11.

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**8. Claim 12**

Claim 12 of the '623 Patent includes the additional limitation "the indicator includes a light indicating data is being written to a card in the respective memory card interface." (JX-0001.0009.) This limitation of claim 12 is identical to that of claim 4. (*Id.*) TPL's and Respondents' arguments regarding claim 3, which also apply to claim 4, apply to claim 12. (*See* RIB at 226-27.) TPL states that the Acer M3970 infringes claim 12 because it infringes claim 4. (CIB at 176.) The Rosewill RCR-YJ-EX601 also infringes claim 12 because it infringes claim 4. (*Id.* at 188.) Respondents do not agree that the Accused Products infringe claim 12. (RIB at 226.)

The ALJ's findings regarding the "indicator" element in claim 3 also apply to claim 12. Therefore, the ALJ finds that the Acer M3970 and the Rosewill RCR-YJ-EX601 include the claimed "the indicator includes a light indicating data is being written to a card in the respective memory card interface." (CX-0944C at Q&A 479-80, 1501-02.) The evidence shows a light on both the Acer M3970 and the Rosewill RCR-YJ-EX601 and explains that a flashing light indicates data is being written onto a card. (*Id.* at Q&A 479-80, 1501-02.)

Therefore, the ALJ finds that the Acer M3970 and the Rosewill RCR-YJ-EX601 meet the limitations of claim 12.

**9. Claim 17**

Unlike independent claims 1 and 9, independent claim 17 requires "selectively operating the first and second subsets." (*Id.*)

TPL's and Respondents' arguments regarding "accessible in parallel" in claim 1 also apply to claim 17. (CIB at 176, 184, 188; RIB at 220.) For claim 17, TPL provides evidence of the additional limitation "selectively operating the first and second subset" in the Accused

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Products. (CRB at 86.) Respondents challenge TPL's evidence showing the Accused Products meet the limitation "selectively operating the first and second subset." (RRB at 44.)

TPL asserts that the claimed "selectively operating the first and second subsets to provide access . . . in parallel" requires that the first subset be selectively operated to read or write data, and then the second subset be selectively operated to write or read data. (CRB at 86.) Based on the TPL's interpretation, simultaneous read and write access to the memory cards would directly contradict the phrase "selectively operating." (*Id.* at 86-87.)

Respondents are not persuaded by TPL's interpretation of "selectively operating." (RRB at 44.) Respondents identify two issues with TPL's interpretation of "selectively operating." (*Id.*) First, the interpretation directly contradicts the plain language of claim 17. (*Id.*) The claim language requires that the memory cards of the first and second types are accessed in parallel, which is the opposite of sequential. (*Id.*) Second, Mr. Buscaino testified that the accessible in parallel limitation requires data to be concurrently read from the first card and written on the second card. (*Id.* at 44-45.) Because data cannot be concurrently read from the first card and written to a second card in the Accused Products, none of Respondents' Accused Products infringe the asserted claims of the '623 Patent. (*Id.* at 45.)

The ALJ finds the Accused Products meet the limitation "selectively operating" because the Accused Products selectively operate multiple memory cards. The evidence shows that the Accused products selectively provide access to the two different types of memory cards. (CX-0944C at Q&A 483-84, 1399-1400, 1503-05.) The evidence further shows that memory cards in the Accused Products are capable of being accessed in parallel. (*See id.* at Q&A 483-4, 1399-1400, 1505.) As with claim 1, the evidence includes a screen shot that shows files being transferred from one memory port to the second memory port. (*Id.* at Q&A 484, 1399, 1505.)



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Therefore, a preponderance of the evidence shows the memory cards in the Accused Products can be accessed in parallel. (*Id.*)

TPL also argues that Respondents induce infringement of claim 17. (CIB at 176, 184, 188.) TPL states that Acer instructs end users to use the Acer M3970 in accordance with the claim 17 and, therefore, induces infringement by the users. (*Id.* at 176.) Because the Acer M3970 includes the structure of claim 17, as shown in claim 1, The product practices each element of claim 17. (*Id.*)

Similarly, TPL asserts that Kingston induces users to infringe claim 17 through use of the Kingston FCR-HS219/1. (*Id.* at 184.) The Kingston FCR-HS219/1 provides access to a plurality of memory card interfaces comprising a first subset to interface with a memory card of a first type and a second subset interface with a memory card of a second type. (*Id.*) Kingston induces end users to insert a first type of memory card into one interface, *e.g.*, CF interface, and a second type of interface, *e.g.*, MMC and SD interface, as evidenced by the ports available with card indications instructing end users where to insert different card types. (*Id.*) The Kingston FCR-HS219/1 selectively operates the first and second subsets, *e.g.*, CF, SD, and MMC, to provide access to the memory cards of the first and second types in parallel to transfer data from the memory card of the first type to the memory card of the second type. (*Id.* at 185.)

In addition, TPL states Rosewill induces users to infringe claim 17. (*Id.* at 188.) TPL argues that Rosewill induces users to insert a first type of memory card into one interface, *e.g.*, xD interface, and a second type into another interface, *e.g.*, MMC and SD interface, as evidenced by the ports that Rosewill makes available on the Rosewill RCR-YJ-EX601. (*Id.*) The Rosewill also induces users of the Rosewill RCR-YJ-EX601 to practice the limitation “selectively operating the first and second subset to provide access to the memory cards of the

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first and second types in parallel to transfer data from the memory card of the first type to the memory card of the second type,” JX-0001.0009. (*Id.*) Specifically, Rosewill induces users to use the Rosewill RCR-YJ-EX601 in which at least one of the memory card interfaces is configured to interface with a plurality of different memory card types. (*Id.* at 189.)

In response to TPL’s claim that the Respondents induce infringement of claim 17 through its users, Respondents argue that TPL failed to present evidence that an entity practiced the method recited in claim 17. (RIB at 227.) To prove induced infringement, TPL must show that a witness, other than the experts involved in the investigation, used an accused product to practice the claimed method. (*Id.*) Respondents further argue that TPL has waived any arguments relating to induced infringement because TPL did not raise it in its Pre-Hearing Brief. (RRB at 46-47.)

As an initial matter, the ALJ finds that TPL has waived any argument of induced infringement. Ground Rule 8.1(f) states, in relevant part:

A statement of the issues to be considered at the hearing that sets forth with particularity a party’s contentions on each of the proposed issues, including citations to legal authorities in support thereof. Any contentions not set forth in detail as required herein shall be deemed abandoned, or withdrawn, except for contentions of which a party is not aware and could not be aware in the exercise of reasonable diligence at the time of filing the pre-hearing statements.

There is nothing in TPL’s pre-hearing brief that discusses induced infringement of the ‘623 Patent. Thus, pursuant to Ground Rule 8.1(f), the ALJ finds that TPL has waived that argument.

Moreover, even if the ALJ were to consider induced infringement, the ALJ finds that TPL has failed to present any “evidence of culpable conduct, directed to encouraging another’s infringement, not merely that the inducer had knowledge of the direct infringer’s activities.” (*See DSU Med. Corp. v. JMS Co.*, 471 F.3d 1293, 1306 (Fed. Cir. 2006) (*en banc*); CX-0944C at Q&A 481-82, 1379-80, 1401-08, 1507-08 (lacking proof of Respondents’ intent and knowledge).)

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Consequently, the ALJ finds that TPL has failed to show that Respondents induce infringement of claim 17. As discussed, *infra* Section V.D.1, TPL has failed to satisfy the requirements for *Certain Electronic Devices with Image Processing Systems, Components Thereof, and Associated Software*, Inv. No. 337-TA-724, Commission Op. (December 21, 2011), for this method claim, because it has failed to show induced infringement at the time of importation.

#### 10. Claim 18

Claim 18 of the '623 Patent includes the additional limitation "at least one of the memory card interfaces is configured to interface with a plurality of different memory card types." This limitation is similar to that in claims 2 and 10. (*Id.*) Like claim 2, Respondents do not appear to dispute that the Accused Products include the additional limitation of claim 18. (RIB at 226-27.)

The ALJ finds that the Accused Products meet the limitation of claim 18. (CX-0944C at Q&A 485-86, 1401-02, 1507-8.) Text adjacent to a memory card interface in each of the Accused Products indicates different types of memory cards can be used in that interface. (*Id.* at Q&A 486, 1402, 1508.) Based on this text, the Accused Products include "at least one of the memory card interfaces is configured to read a plurality of different memory card types." (CX-0944C at Q&A 486, 1402, 1508.)

TPL states that Acer induces end users to use the Acer M3970 wherein at least one of the memory card interfaces is configured to interface with a plurality of different memory card types—one interface for CF or MD and one for SD or MMC. (CIB at 177.) TPL also states the Kingston FCR-HS219/1 includes at least one memory card interface configured to interface a plurality of different memory card types. (*Id.* at 185.) In addition, TPL asserts Rosewill induces

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users to use the Rosewill RCR-YJ-EX601, at least one of the memory card interfaces is configured to interface with a plurality of different memory card types. (*Id.* at 189.)

As set forth *supra*, the ALJ finds that TPL has waived any arguments relating to induced infringement. Nevertheless, the ALJ further finds that TPL failed to prove the knowledge and intent required for induced infringement. (*Id.* at Q&A 485-86, 1401-02, 1507-8 (lacking proof of Respondents' intent and knowledge).) Consequently, the ALJ finds that TPL has failed to show that Respondents induce infringement of claim 18. As discussed, *infra* Section V.D.1, TPL has failed to satisfy the requirements for *Certain Electronic Devices with Image Processing Systems, Components Thereof, and Associated Software*, Inv. No. 337-TA-724, Commission Op. (December 21, 2011), for this method claim, because it has failed to show induced infringement at the time of importation.

# 11. Claim 19

Claim 19 of the '623 Patent includes the additional limitation "at least one of the memory card interfaces includes an indicator identifying a status of an operation for a respective memory card interface." This limitation is identical to claims 3 and 11. (*Id.*) Respondents disagree that the Acer M3970 and the Rosewill RCR-YJ-EX601 infringe claim 19. (RIB at 226.) TPL's and Respondents' arguments regarding the "indicator" of claim 3 also apply to claim 19.

The ALJ's findings regarding the "indicator" element in claim 3 also apply to claim 19. Therefore, the ALJ finds that the Acer M3970 and the Rosewill RCR-YJ-EX601 include the claimed "at least one of the memory card interfaces includes an indicator identifying a status of an operation for a respective memory card interface." (CX-0944C at Q&A 487-88, 1509-10.) The evidence shows a light on both the Acer M3970 and the Rosewill RCR-YJ-EX601 and explains that a flashing light indicates data is being written onto a card. (*Id.* at Q&A 487-88,

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1509-10.) The ALJ also finds Respondents' arguments unpersuasive for the same reasons set forth for claim 3.

TPL states Acer induces users to use the Acer M3970 wherein at least one of the memory card interfaces includes an indicator identifying a status of an operation for a respective memory card interface as shown for claim 11. (CIB at 177.) TPL also asserts that Rosewill induces users to use the Rosewill RCR-YJ-EX601 in a manner that infringes claim 18. (*Id.* at 189.) In the Rosewill RCR-YJ-EX601, at least one of the memory card interfaces includes an indicator identifying status of an operation for a respective memory card interface. (*Id.* at 188-89.)

As set forth *supra*, the ALJ finds that TPL has waived any arguments relating to induced infringement. Nevertheless, TPL failed to prove the knowledge and intent required for induced infringement. (See *id.* at Q&A 487-88, 1509-10 (lacking proof of Respondents' intent and knowledge).) Consequently, the ALJ finds that TPL has failed to show that Respondents induce infringement of claim 19. As discussed, *infra* Section V.D.1, TPL has failed to satisfy the requirements for *Certain Electronic Devices with Image Processing Systems, Components Thereof, and Associated Software*, Inv. No. 337-TA-724, Commission Op. (December 21, 2011), for this method claim, because it has failed to show induced infringement at the time of importation.

## 12. Conclusion

As set forth *supra*, the ALJ finds that the Accused Products meet the limitations of claims 1-4, 9-12 and 17-19. However, the ALJ finds that TPL has waived any arguments that Respondents induce infringement of claims 17-19. The ALJ further finds that TPL has failed to satisfy the requirements for *Certain Electronic Devices with Image Processing Systems, Components Thereof, and Associated Software*, Inv. No. 337-TA-724, Commission Op.

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(December 21, 2011), for this method claim, because it has failed to show induced infringement at the time of importation for claims 17-19.

#### **D. The '549 Patent**

##### **1. The Commission's Decision in *Electronic Devices* Does Not Prevent a Finding of Importation**

Respondents initial argument regarding the '549 Patent is that there can be no violation of Section 337 under the Commission's recent opinion in *Certain Electronic Devices with Image Processing Systems, Components Thereof, and Associated Software*, Inv. No. 337-TA-724, Commission Op. (December 21, 2011) ("*Electronic Devices*"), because there is no proof of any infringement of the '549 Patent at the time of importation. (RIB at 166-171.) To understand this argument, the ALJ must explain the holding of the recent Commission decision in *Electronic Devices*.

The Commission Opinion in *Electronic Devices* begins its analysis by looking at the language of Section 337. See *Electronic Devices*, Comm'n Op. at 12-13. The Commission explained that "[t]he plain language of the statute identifies three specific acts that may form the basis of a violation of section 337: importation, selling for importation, and selling after importation." *Id.* at 13. The Commission explained that the statute then specifies in list form the categories of articles that must be involved in the proscribed acts. *Id.* At issue in *Electronic Devices* (and in this investigation) is the first category in that list—"articles that – infringe" a U.S. Patent. *Id.* (quoting 19 U.S.C. § 1337(a)(1)(B)(i)). The Commission explained that "[b]ecause the statute specifies that the articles in question must 'infringe,' an importation analysis that ignores the question of infringement would be incomplete." (*Id.* (footnote omitted).) The Commission then looked to the definition of "infringe" found in 35 U.S.C. § 271. (*Id.*)

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Based on that section of the patent statute, the Commission held that Section 337(a)(1)(B), the Commission held that “articles that — infringe” refers to articles that directly or indirectly infringe. (*Id.*) The Commission then further held that the “infringement, direct or indirect, must be based on the articles *as imported* to satisfy the requirements of Section 337.” (*Id.* at 13) (emphasis added).

For the apparatus claims (claims 11 and 21), Respondents are correct that at importation the accused devices do not include, at the very least, a “flash storage system.”<sup>3</sup> Indeed, TPL does not dispute that the products at importation lack at least this element. Thus, TPL concedes that the accused products do not directly infringe claims 11 and 21 at importation. (CIB at 217-219.) Instead, TPL contends that Respondents indirectly infringe claims 11 and 21 at importation because TPL contends that Respondents induce infringement of claims 11 and 21. TPL bases its claims of inducement on an allegation that the accused devices are intended to be combined with “flash storage system” and a “computing device” for the products that also lack that element. This contention presents an interesting question not fully explored in *Electronic Devices*—whether an imported component can induce infringement of system claims at importation, where the allegedly infringing system is assembled after importation. In order to begin to understand the answer to that question, we must look at the Commission’s discussion of method claims in *Electronic Devices*.

With respect to method claims, the Commission further held in *Electronic Devices* that the practice of an asserted method claim within the United States after importation cannot serve as the basis for an exclusion order. *Electronic Devices*, Comm’n Op. at 17. This holding arises because an article, standing alone, cannot directly infringe a method claim. *Id.*; see also *Cardiac*

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<sup>3</sup> Respondents are also correct that some of the products also lack a “computing device” as required by the claims, but for the same reasons as discussed above for flash storage system that is not significant.



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*Pacemakers, Inc. v. St. Jude Medical, Inc.*, 576 F.3d 1348, 1364 (Fed. Cir. 2009). A method claim is infringed only where someone performs all of the claimed method steps. See *NTP v. Research in Motion, Ltd.*, 418 F.3d 1282, 1318 (Fed. Cir. 2005) (“[T]he use of a [claimed] process necessarily involves doing or performing each of the steps recited.”); *Joy Techs., Inc. v. Flakt, Inc.*, 6 F.3d 770, 775 (Fed. Cir. 1993) (“A method claim is directly infringed only by one practicing the patented method”).

The Commission ruled that complainant did not have a legally cognizable claim that respondent violated the statute by using articles within the United States when infringement allegedly occurred by virtue of that use. *Electronic Devices*, Comm’n Op. at 19 (“domestic use of such a method, without more, is not a sufficient basis for a violation of Section 337(a)(1)(B)(i)”). Nevertheless, the Commission stated that the complainant “might have proved a violation of section 337 if it had proved indirect infringement” of the method claim. *Id.* The Commission cited, as an example, *Certain Chemiluminescent Compositions, and Components Thereof and Methods of Using, and Products Incorporating the Same*, Inv. No. 337-TA-285, USITC Pub. 2370, Order No. 25 (Initial Determination) at 38 n. 12 (March 1991), in which “the ALJ found that the ‘importation and sale’ of the accused articles constituted contributory and induced infringement of the method claim at issue in that investigation.” *Electronic Devices*, Comm’n Op. at 18 n. 11.

Thus, TPL can, at the very least, meet the importation requirement for its method claims (claims 7 and 9) if it can show that the importation and sale of the accused articles constitutes contributory or induced infringement of the method claims. Furthermore, the ALJ extends the reasoning of *Electronic Devices* to conclude that if TPL can show the importation and sale of the accused articles constitutes contributory or induced infringement of the apparatus claims (claims



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11 and 21), then TPL can also meet the importation requirement for those claims as well. The ALJ notes that there is some internal tension in reasoning of *Electronic Devices*. For instance, while *Electronic Devices* holds the domestic use of a method cannot serve the basis for meeting the importation requirement, proof of induced infringement will likely rest on proof of domestic use of the method (i.e., domestic direct infringement). See *Mirror Worlds, LLC v. Apple, Inc.*, 692 F.3d 1351 (Fed. Cir. 2012) (“Inducement of infringement requires that there be a showing of an underlying act of direct infringement.”).

Moreover, the ALJ further notes that the facts in this case differ from *Chemiluminescent Compositions*, which was cited by the Commission as an example of the application of indirect infringement to meet the importation requirement. In *Chemiluminescent Compositions*, the accused device (glow-in-the-dark necklace) as imported was a product that need not be combined with any other product in order to be used in an infringing manner. *Chemiluminescent Compositions*, Order No. 25 (Initial Determination) at 7-8. The present investigation more closely resembles the ALJ’s recent decision in *Certain Gaming and Entertainment Consoles, Related Software, and Components Thereof*, Inv. 337-TA-752, Final Initial Remand Determination (March 25, 2012) (“*Gaming and Entertainment Consoles*) (unreviewed). In the present investigation and in *Gaming and Entertainment Consoles*, to practice the asserted method claims, the accused devices must be used in conjunction with a separate device. In *Gaming and Entertainment Devices*, the accused device, Microsoft’s Xbox 360 system, was accused of infringing the asserted method claims when it was used with a wireless accessory, such as a wireless controller. (*Gaming and Entertainment Consoles*, Final IRD, at 13.) This is similar to the asserted method claims in this investigation where the accused devices must be used in conjunction with a flash memory card in order to infringe.

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However, the ALJ believes that neither the tension in *Electronic Devices* nor the differences between this investigation and *Chemiluminescent Compositions* alters the conclusion that TPL can meet the importation requirement if it can prove that the importation and sale induces infringement or is contributory infringement of the asserted apparatus and method claims of the '549 Patent. TPL does not allege that Respondents have committed contributory infringement, so the sole question is whether the Respondents induce infringement of the apparatus and method claims through their importation and sale of the accused devices.

## 2. Induced Infringement

As was explained above, the Patent Act provides that a party who “actively induces infringement of a patent shall be liable as an infringer,” 35 U.S.C. § 271(b). Inducement of infringement requires that there be a showing of an underlying act of direct infringement. *See Linear Tech. Corp. v. Impala Linear Corp.*, 379 F.3d 1311, 1326 (Fed. Cir. 2004). “[I]nduced infringement under § 271(b) [also] requires knowledge that the induced acts constitute patent infringement.” *Global-Tech*, 131 S. Ct. at 2068. The ALJ finds that TPL fails to show that the accused products directly infringe the asserted claims for at least two reasons. Thus, TPL has failed to show Respondents induce infringement of the asserted claims.

### a. Direct Infringement

#### (1) Disputed Claim Elements

Beginning with direct infringement, Respondents argue that the following limitations of independent claims 7 and 11 are not met by the accused products:

- Claim 7: “determining whether the flash storage system includes a controller for error correction.” (JX-0002, 30:30-31.)
- Claim 11: “a detector to determine whether the flash storage system includes a controller for error correction.” (Id. at 30:57-59.)

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**Claim 7:** “in an event where the flash storage system does not have a controller for error correction, using firmware in the flash adapter to perform operations to manage error correction of the flash section, including bad block mapping of the flash section in the flash storage system that is coupled to the flash adapter section.” (Id. at 30:32-37.)

**Claim 11:** “a flash adapter which comprises firmware to perform, in an event where the flash storage system does not have a controller for error correction, operations to manage error correction of the flash section, including bad block mapping of the flash section in the flash storage system that is coupled to the flash adapter section.” (Id. at 30:59-65.)

These four limitations fall into two groups. The first group consists of the “determining” and “detector” limitations of claims 7 and 11, respectively. The second group consists of the “using firmware” and “firmware” limitations of claims 7 and 11, respectively.

Respondents argue that the “plain language” of claims 7 and 11 require the affirmative step of determining whether the flash memory has a controller for error correction. (RIB at 171.) Respondents assert that this requires more than simply detecting or determined the type of memory card inserted. (RIB at 172.) Respondents argue that the accused products neither determine whether there is a controller nor contain a detector to determine whether there is a controller. (RIB at 172-174.) Instead, Respondents contend that their products merely utilize third-party controllers that detect the insertion of a card, identify the type of card inserted, and interface with the asserted card pursuant to the appropriate flash memory card standard. (RIB at 173-174.) Respondents assert that “[a]t no point do the third-party controllers—or any other component in the Respondents’ accused products—determine whether the inserted card has a controller as required by claims 7 and 11, as no such determination is necessary.” (RIB at 174.) Respondents further assert that TPL’s expert conceded this. (RRB at 37 (citing Tr. 743:24-45:7).) Respondents contend that their expert testified that the controllers in the accused products have many sections and interfaces, and that depending on the detection of the type of card inserted or

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the slot into which the card is inserted, the controller will use the appropriate controller subsection to interface with the card. (RRB at 38.) Respondents argue that this confirms that the accused products do not meet the determining/detector limitations because the accused products do not need to determine whether the inserted card has a controller for error correction. (RRB at 38.)

TPL responds that these arguments have no merit. TPL contends that nothing in the claims requires that the controller chip must physically detect the presence of a controller for error correction in an inserted flash memory card. (CIB at 216.) TPL further argues that the claims only require that the controller chip determine whether inserted card has a controller for error correction. (CRB at 76.) TPL asserts that the claims are open ended and do not preclude the controller chip from making this determination by identifying the type of card and knowing that that card type does or does not have a controller for error correction. (CRB at 76.) TPL responds that to the extent that the controller needs to detect the physical presence of a controller within the xD flash storage system to meet this element, there would still be infringement under the doctrine of equivalents. (CIB at 217.)

The ALJ agrees with Respondents that the accused products do not meet this limitation. The ALJ finds that this result is compelled by the language of the claims. Claim 7 requires “determining whether the flash storage system includes a controller for error correction.” There is no dispute between the parties that the products do not explicitly determine if the flash storage system contains a controller or not. (Tr. 743:24-745:7; *see also* CX-0944C, Q&A 764-65, 774-75, 787-88, 797-98 (Dell); 1595, 1605 (Epson).) Instead, the accused products all simply determine what type of memory card has been inserted into the slot. (*See, e.g.*, Buscaino Tr. 555:4-561:1, 743:24-745:7; CX-0944C at Q/A 764-65, 774-75, 787-88, 797-98 (Dell), RX-

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2884C, Q/A 543 (Brother); 1205-06, 1231-32 (HP), 1456-57, 1466-67 (as to Newegg/Rosewill); CX-0944C, Q/A 1594-95, 1604-05 (Seiko Epson); 81-88j, 102-1 (as to Acer).) The ALJ agrees with Respondents that because there is no actual determination of whether a controller exists, then the accused products cannot meet the literal language of the claims. (Brother: RX-2884C, Q/A 146-52, 154-74; 186-202; RX-1341C.0007; RX-2386; RX-2376C; RX-0587C; RDX-0270C; Banerjee, Tr. 1421:21-1422:6, 1422:17-1423:13; Dell: RX-2884C, Q/A 242-63, 278-95, 311-35, 351-68; RDX-277C, RDX-281C; RX-3192.0001-20; RX-3162C.9-11; RX-3167C.0004-8; RX-3168C.0001-2; CX-0944C, Q/A 765, 775, 788, 798; Seiko Epson: RX-2884C, Q/A 621-38, 648-49, 653-70, 680-81; RX-3419C.0006, RX-3426C.0005, .0009, RDX-0290C; RDX-0291C; CX-0944C, Q/A 1595, 1605; Acer: RX-2884C, Q/A 81-88, 102-13; HP: RX-2884C, Q/A 489; Newegg/Rosewill: RX-2884C, Q/A 536-43, 564-72; CX-0322.0007.0009; RDX-0285; CX-0944C, Q/A 1457, 1467.)

The ALJ finds that this same argument applies with even greater force to Claim 11. The ALJ finds that the plain language of Claim 11 requires that the accused products contain “a detector to determine whether the flash storage system includes a controller for error correction.” (See RX-2884C, Q/A 38-46.) There is simply no such “detector” in the accused products. Thus, they do not infringe Claim 11. (Brother: RX-2884C, Q/A 146-52, 154-74; 186-202; RX-1341C.0007; RX-2386; RX-2376C; RX-0587C; RDX-0270C; Banerjee, Tr. 1421:21-1422:6, 1422:17-1423:13; Dell: RX-2884C, Q/A 242-63, 278-95, 311-35, 351-68; RDX-277C, RDX-281C; RX-3192.0001-20; RX-3162C.9-11; RX-3167C.0004-8; RX-3168C.0001-2; CX-0944C, Q/A 765, 775, 788, 798; Seiko Epson: RX-2884C, Q/A 621-38, 648-49, 653-70, 680-81; RX-3419C.0006, RX-3426C.0005, .0009, RDX-0290C; RDX-0291C; CX-0944C, Q/A 1595, 1605;

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Acer: RX-2884C, Q/A 81-88, 102-13; HP: RX-2884C, Q/A 489; Newegg/Rosewill: RX-2884C, Q/A 536-43, 564-72; CX-0322.0007.0009; RDX-0285; CX-0944C, Q/A 1457, 1467.)

At bottom, TPL's infringement argument for this element is a doctrine of equivalents argument, not a literal infringement argument. TPL is arguing that detecting or determining the type of the card effectively detects or determines whether there is a controller or not. However, the ALJ cannot ignore the explicit claim language for literal infringement. *See Key Mfg. Group, Inc. v. Microdot, Inc.*, 925 F.2d 1444 (Fed. Cir. 1991). Thus, because the literal claim language requires a "detector" or "determining" whether or not there is a controller and the products do not do this, there can be no literal infringement.

As for TPL's doctrine of equivalent arguments, the ALJ finds that they are waived. These arguments were not presented in TPL's expert's direct witness statement or in its pre-hearing brief. *See* Ground Rule 8. Thus, the ALJ declines to find that this claim element is met by the doctrine of equivalents.

The other disputed limitation of the '549 Patent relates to whether the accused products have "firmware" for "error correction" such as "bad block mapping." (RIB at 174-177.) Respondents argue that TPL has failed to show that the accused products meet this requirement, which is found in all of the asserted claims. This dispute is narrow. It is undisputed (or at least not seriously disputed) that "error correction," such as bad block mapping, is an essential function of any memory system using the memory cards that are at issue here (xD). It also appears to be undisputed that any error correction must be performed in the accused product (because the accused readers involve xD cards that lack a controller within the card). The dispute, as the ALJ understands it, is whether TPL has proven that Respondents' products use firmware to accomplish this. Respondents note that Mr. Buscaino testified that he did not look at

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any firmware in the Respondents' accused products or do any testing on any of the Respondents' accused products to determine if the accused products had firmware to perform the required error correction and bad block mapping functions. (RIB at 175.) Rather, Respondents argue that the documents Mr. Buscaino does rely upon do not support his opinion that the Respondents' accused products use firmware to accomplish the error correction. (RIB at 175.) Respondents assert that these documents relating to third-party controller chips utilized in the accused products make no reference to firmware that performs error correction or bad block mapping, and they provide no explanation as to how any such operation would be or are allegedly performed. (RIB at 175.) Respondents contend that these documents indicate that card-specific interface operations are performed by card-specific hardware interfaces within the host controller, not by the general microprocessor to which Mr. Buscaino points. (RIB at 175-176.) Respondents assert that to the extent the documents for certain third party controllers disclose performance of error correction, they do so by stating error correction is performed by hardware without any mention of firmware. (RIB at 176.)

Respondents argue that the evidence shows that using firmware in the flash adapter is not the only way to accomplish error correction and bad block mapping for xD cards, and TPL's reliance on the xD standard to demonstrate that Respondents' products allegedly meet the "firmware" limitation is insufficient. (RIB at 176.) Respondents assert that there is no mention of firmware for error correction or bad block mapping in these documents. (RIB at 177.) Respondents further argue that some documents regarding components used in the accused products indicate that those products do not use firmware to accomplish error correction or bad block mapping. (RRB at 39.) Respondents contend that because the standard "does not provide the level of specificity required to establish that practicing that standard would always result in



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infringement” or the standard is optional or can be implemented in different ways, reliance on that standard is insufficient as a matter of law. (RRB at 40 (quoting *Fujitsu Ltd. v. LG Elecs., Inc.*, 620 F.3d 1321, 1327-28 (Fed. Cir. 2010)).)

TPL argues that in light of all the other evidence it submitted and Mr. Buscaino reviewed, there was no need for Mr. Buscaino to review the firmware code of the accused products. (CRB at 77.) TPL points to evidence including the datasheets for the microprocessor controller, the xD memory card specification, testimony by its expert, and testimony by Respondents’ expert that software or firmware would have to perform the error correction and bad block mapping. (See, e.g., CIB at 197, 200-201, 206-207, 211-212, 214-215; CRB at 77-78.) TPL argues that this is more than sufficient to show that the accused products meet this claim limitation.

While it is a close call and there is a reasonable likelihood that the accused products use firmware, the ALJ finds that TPL has failed to show that the accused products meet this claim limitation by a preponderance of the evidence. The ALJ finds that the xD specification says nothing about firmware or how the bad block mapping and error correction are done. (CX-359C.22-25.) Thus, the xD specification cannot, by itself, prove that firmware is used. The same problem exists for the various controller chip specifications for the controller chips used in the accused products that TPL cites. While those controller chip specifications do contain block diagrams showing that the controller chips have a CPU and ROM, none of the specifications cited by TPL discuss firmware or by themselves prove that the bad block mapping is performed by firmware. Mr. Buscaino’s testimony is similarly inadequate. Mr. Buscaino simply testifies that “firmware executed” by each controller performs the bad block mapping. (See, e.g., CX-0944C at Q/A 403.) But he fails to explain how he reaches the conclusion that firmware is used to perform these functions. He only cites to the xD specification and the various controller chip



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specifications, but as discussed above, those specifications do not establish that firmware is used to perform these functions. The ALJ finds that without some reasoning, explanation, or specific evidence to support his conclusion that firmware is performing these functions, Mr. Buscaino's conclusory testimony that firmware performs these functions is inadequate. Finally, TPL points to testimony by Dr. Banerjee where TPL contends that Dr. Banerjee "confirmed" that the accused products meet this limitation. (CIB at 197; *see also* CRB at 77 (citing Tr. 1375:19-1403:16).) The ALJ has reviewed this testimony and while Dr. Banerjee admitted that bad block mapping would require either firmware or software, he did not admit that this must be performed by firmware. If one reviews the entire testimony, he makes clear that it could be performed by software saved elsewhere and not necessarily by firmware, which he defined as software permanently saved to the ROM. (Tr. 1375:19-1403:16.) Thus, even this testimony does not establish by a preponderance of the evidence that firmware is performing these functions.

The ALJ notes that if Mr. Buscaino provided additional reasoning for why he reached the conclusion he did, the ALJ would be able to give more weight to his testimony. However, without any explanation for how he reached his conclusion and given the uncertainty about whether firmware, software, or even hardware are used to perform error correction and bad block mapping, the ALJ cannot find that TPL met its burden of proof regarding this element.

TPL failed to show that the "determining/detector" and "bad block/firmware" limitations were met. Therefore, there is no direct infringement of the independent claims.

**(2) Dependent Claims 19 and 21**

Claims 19 and 21 depend on independent claims 7 and 11 respectively. Inasmuch as each claim limitation must be present in an accused device in order for infringement to be found (either literally or under the doctrine of equivalents), a device cannot infringe a

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dependent claim if it does not practice every limitation of the independent claim from which it depends. *See Warner-Jenkinson Co.*, 520 U.S. at 40; *Monsanto Co. v. Syngenta Seeds, Inc.*, 503 F.3d 1352, 1359 (Fed. Cir. 2007). Furthermore, the Federal Circuit explained that:

One may infringe an independent claim and not infringe a claim dependent on that claim. The reverse is not true. One who does not infringe an independent claim cannot infringe a claim dependent on (and thus containing all the limitations of) that claim.

*Wahpelton Canvas Co., Inc. v. Frontier, Inc.*, 870 F.2d 1546, 1552 (Fed. Cir. 1989). Accordingly, the ALJ finds that TPL has failed to prove infringement of claims 19 and 21 as well.

**b) Induced Infringement**

Because induced infringement requires a showing of direct infringement and TPL has failed to show direct infringement of the asserted claims of the '549 Patent, TPL's assertions that Respondents induce infringement of the asserted claims also fails. *See Mirror Worlds, LLC v. Apple, Inc.*, 692 F.3d 1351, 1359-60 (Fed. Cir. 2012) (finding no inducement where acts constituting direct infringement had not been found).

**E. TPL's Failure of Proof**

Respondents argue that TPL failed to provide any analysis or evidence that each limitation of any asserted claim is present and, consequently, has failed to prove infringement of any of the asserted patents. (RIB at 248.) Respondents argue that TPL only provided conclusory statements of its expert without any analysis, which is insufficient to meet its burden. (RIB at 248-249.) Respondents argue that TPL provided a claim-by-claim, limitation-by-limitation analysis for only a couple of products, but that the remainder of the accused products ("the Uncharted Products") were only set forth in a table that identified the controller and connector combinations and included conclusory statements from TPL's experts that the controllers and

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connectors perform certain functions related to the asserted claims. (RIB at 249.) TPL's experts failed to provide additional infringement allegations on these additional controller and connector assembly combinations. (RIB at 249.) Rather, the experts simply "hypothesize" that these controller and connector assemblies have certain attributes or perform certain functions. (RIB at 249-250.) Respondents argue that for the listed Uncharted Products, the ALJ should find that TPL failed to provide sufficient evidence to show infringement. (RIB at 250-253.)

Respondents further assert that for the Seiko Epson products that TPL did provide a limitation by limitation analysis, TPL failed to show that the necessary signal/power lines or card detect signal lines that connect the controller to the card connector. (RIB at 253.)

TPL argues that it provided sufficient evidence to prove infringement even for those products for which Mr. Buscaino did not provide claim charts. (CRB at 89.) TPL argues that Respondents' expert and Mr. Buscaino agree on how the products operate. (CRB at 89.) TPL notes that Respondents do not challenge the accuracy of the infringement charts that form the basis for his opinion on the Uncharted Products, the accuracy of the information reflected in those charts, nor do they disagree with Mr. Buscaino on how the products operate, yet Respondents still failed to stipulate to representative products. (CRB at 89.) TPL explains, in further detail, how the Seiko Epson WorkForce 545, the Canon Color ImageCLASS MF9280Cdn, HP Pavilion dv7 Notebook Computer, and Brother MFC-J5910DW infringe the asserted claims. (CIB at 89-101.)

The ALJ finds Respondents' arguments puzzling. It is not clear, what, exactly, Respondents are attempting to argue. At best, it appears that Respondents argue that TPL should not have used representative products, but do not go so far as to dispute that the products included in the infringement claim charts are not, in fact, representative. Indeed, it is not quite

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clear what the significance of Mr. Buscaino's failure, according to Respondents, to "analyze any of the controllers or assemblies by name" actually is. Respondents do not assert that the controller and connector assemblies actually perform the certain functions differently or have different attributes nor do they present any evidence to that effect. Respondents also do not assert that the information set forth in the tables is inaccurate. Rather, Respondents argue that the controllers and connector assemblies are manufactured differently, have different configurations and specifications, schematics, design considerations, etc. but do not explain or cite to any evidence as to how these differences would affect the assumption that the representative products are accurate representations of the accused products for purposes of infringement analysis. There is no evidence before the ALJ that these different controllers and connector assemblies are so different as to make the representative product an inadequate means of showing how these controllers or connector assemblies work.

In sum, it appears to the ALJ that Respondents argue that TPL should not have used representative products and should have performed an analysis on each and every single accused product, but fail to present any evidence that the representative products relied upon by TPL are inaccurate representations of the Uncharted Products. According to Respondents, TPL should have charted every accused product in this investigation. Absent some showing by Respondents that the representative products relied upon are not, in fact, representative of all of the accused products, the ALJ will not make such an onerous requirement. Infringement analyses of accused products based on analyses of representative products is not a novel concept before this ALJ and the Commission and, given the size of Section 337 investigations and the number of accused products, it is a fairly common practice for complainants to use representative products in proving infringement. While Respondents are, of course, not *required* to stipulate to

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representative products, a failure to do so, especially in cases such as this one where there is no *genuine* dispute as to whether the representative product is an accurate representation of the accused products, smacks of petty of gamesmanship. The purpose and focus of a Section 337 investigation as it relates to infringement is to determine whether the accused products infringe the asserted patent and any means of making such a determination more streamlined and focused should be the goal of all parties participating in the investigation. Consequently, to the extent that Respondents argument appears to be that TPL has failed to prove infringement because it failed to chart each and every accused product, the ALJ finds such a requirement unnecessary given that there is no evidence before the ALJ that the representative products are inaccurate.

**VI. VALIDITY****A. Background**

One cannot be held liable for practicing an invalid patent claim. *See Pandrol USA, LP v. AirBoss Railway Prods., Inc.*, 320 F.3d 1354, 1365 (Fed. Cir. 2003). However, the claims of a patent are presumed to be valid. 35 U.S.C. § 282; *DMI Inc. v. Deere & Co.*, 802 F.2d 421 (Fed. Cir. 1986). Although a complainant has the burden of proving a violation of section 337, it can rely on this presumption of validity.

Respondents have the burden of proving invalidity of the patent. This “burden is constant and never changes and is to convince the court of invalidity by clear evidence.” *Idi v. Microsoft Corp.*, 131 S. Ct. 2338, 2243 (2010) (citing Judge Rich in *American Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F. 2d 1350, 1360 (CA Fed. 1984)). Respondents’ burden of persuasion *never shifts*. *Id.* The risk of “decisional uncertainty” remains on the respondent. *Technology Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1327 (Fed. Cir. 2008); *see also PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1303, 1305 (Fed. Cir. 2008); *Pfizer, Inc.*

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*v. Apotex, Inc.*, 480 F.3d 1348, 1360 (Fed. Cir. 2007). Thus, it is Respondent's burden to prove by clear and convincing evidence that any of the alleged prior art references anticipate or render obvious the asserted claims of the patents in suit. Failure to do so means that Respondents lose on this point. *Id.* (stating, "[I]f the fact trier of the issue is left uncertain, the party with the burden [of persuasion] loses.").

Respondents also bear the burden of going forward with evidence, *i.e.*, the burden of production. *Id.* This is "a shifting burden the allocation of which depends on where in the process of a trial the issue arises." *Id.* However, this burden does not shift until a respondent presents "evidence that might lead to a conclusion of invalidity." *Pfizer*, 480 F.3d at 1360. Once a respondent "has presented a prima facie case of invalidity, the patentee has the burden of going forward with rebuttal evidence." *Id.*

**B. Priority Date**

The parties do not dispute that the priority dates for the '549 Patent and '623 Patent are June 4, 2002 and November 18, 2002, respectively. (CIB at 14-15; RIB at 181, 217.) The parties do dispute the priority date to which the '443, '424, and '847 Patents are entitled.

TPL contends that the '443, '424, and '847 Patents are entitled to an effective filing date of July 6, 2000, which is the filing date for the '638 patent, and that they have an invention priority date of no later than February 18, 2000. (CIB at 233-240.) TPL only cursorily presses its claim that the '443, '424, and '847 Patents are entitled to an invention date of February 18, 2000. (*See* CIB at 234.) The ALJ finds that this single sentence is insufficient to prove this earlier date

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of invention and, in any event, it is irrelevant, because only the effective filing date appears to have any significance to the parties' arguments in this case.<sup>4</sup> (CIB at 233-240.)

Respondents argue that the patents are not entitled to an effective filing date of July 6, 2000 because the '638 patent fails to provide an adequate written description of the asserted claims of the '424, '443 and '847 patents. (RIB at 86-87.) Specifically, Respondents argue that the '638 patent fails to disclose the following limitations:

'443 Patent, all asserted claims:

- a controller / controller chip to map at least a subset of the at least one set of contact pins to a set of signal lines or power lines, based on an identified type of a memory media card.
- a set of contact pins protruding from an upper or lower surface /portion of an adapter, wherein the set of contact pins are integrated within molded plastic (embedded).

'424 and '847 Patents, all asserted claims:

- means for mapping power, ground or data signals between said interconnection pins / interconnection means / signal lines and said one or more contact pins depending upon the identification of the type of memory card inserted into said port (structure: a controller).
- a plurality of sets of contact pins mounted on said surface at locations adapted to interface with the electrical contacts of a corresponding one of a plurality of different type memory media cards when inserted into said port

'424 Patent, all asserted claims:

- means for identifying the type of memory card inserted into said port

'847 Patent, all asserted claims:

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<sup>4</sup> The parties also disputed the date of invention for the claims that were asserted in the '638 Patent, but as discussed earlier, the '638 Patent was only asserted against Dell, which has been terminated from this investigation. Because this dispute was only relevant to the asserted claims of the '638 Patent and no other patent, the ALJ finds that this dispute is now MOOT and will not consider any claims of prior invention dates for the asserted claims of the '638 Patent.



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- a set of signal lines connected to a controller, the number of signal lines being fewer than the number of contact pins

(RIB at 87-88.)

Typically, the priority date, or effective filing date, of a patent is the date of the filing of the first patent application. The right to claim priority is codified in 25 U.S.C. § 120, which states, in pertinent part:

An application for patent for an invention disclosed in the manner provided by the first paragraph of section 112 of this title in an application previously filed in the United States, or as provided by section 363 of this title, which is filed by an inventor or inventors named in the previously filed application shall have the same effect, as to such invention, as though filed on the date of the prior application, if filed before the patenting or abandonment of or termination of proceedings on the first application or on an application similarly entitled to the benefit of the filing date of the first application and if it contains or is amended to contain a specific reference to the earlier filed application

Thus, to claim benefit to an earlier patent application the patentee must satisfy the substantive requirements of 35 U.S.C. § 112 (*i.e.*, does the parent application “reasonably convey to the artisan that the inventor had possession at the time of the later claimed subject matter”) and the procedural requirements of 35 U.S.C. § 120. *See Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997) (“a prior application itself must describe an invention, and do so in sufficient detail that one skilled in the art can clearly conclude that the inventor invented the claimed invention as of the filing date sought”) (citations omitted); *see also Amgen Inc. v. Hoechst Marion Rousell, Inc.*, 314 F.3d 1313, 1330 (Fed. Cir. 2003) (“Satisfaction of this requirement is measured by the understanding of the ordinarily skilled artisan.”) (citation omitted). A party challenging priority date must demonstrate by clear and convincing evidence that the parent application does not disclose the invention at issue as of the relevant filing date. *Certain Adjustable Keyboard Support Systems and Components Thereof*, Inv. No. 337-TA-670, Final Initial Determination at p. 77 (November 2011).



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The ALJ finds that Respondents have failed to show by clear and convincing evidence that the '638 patent fails to disclose the inventions claimed in the asserted claims of the '424, '442, and the '847 patents.

**1. “controller/controller chip” and “means for mapping” limitations**

Respondents argue that the '638 Patent fails to disclose a controller because (1) the '638 patent fails to disclose an “all-in-one design” that is utilized by the '424, '443 and '847 patents and (2) the '638 patent touts the use of passive adapters while the '424, '443 and '847 patents disclose and claim active adapters. (RIB at 88-90.) Specifically, Respondents note that the '638 patent discloses the use of separate adapters and separate connectors to accommodate different card formats while the '424, '443 and the '847 patents discloses multiple sets of contact pins mounted on a single surface to interface with different card formats. (RIB at 88.) Furthermore, the '638 patent's disclosure of separate adapters means that an onboard controller located on the adapters to map contact pins to interconnection pins was not necessary. (RIB at 89-90.)

TPL argues that the '638 Patent discloses these elements. (CIB at 239; CRB at 54-56.) TPL cites to specific parts of the '638 patent that it asserts discloses these elements. (CRB at 54 (citing '638 Patent, figures 3B, 4A-E, 5, 6, 7, 9, 10; 3: 13-48; 4: 35-56; 7: 35-49, 62-64; 8: 5-21; 30-42; 11: 6-34, 44-49; 4: 35-38; 7-35-8: 12; 8: 38-48; 9: 4-17; 9: 58- 10: 1; 11: 6-15; 11: 38-52.) TPL asserts that based on these disclosures, one of ordinary skill in the art would understand from the specification that the inventors were in possession of a controller that maps contact pins to signal lines and data signals between interconnection pins/means or signal lines and contact pins depending on the identified type of card. (CRB at 55-56.)

TPL further disputes Respondents' arguments that the '638 Patent negates the later-claimed inventions of the '424, '443, and '847 Patents because the inventors, according to

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Respondents, recognized there was no need to have an onboard controller. (CRB at 56.) As shown in the examples above, the inventors' disclosure explicitly calls for a single on-board controller / converter chip read data and identify card type. And, as evidenced by the examples discussed above, the on-board controller that is disclosed necessarily maps data signals depending on card type because 1-bit MMC and 4-bit SD share the same set of contact pins, per the '638 Patent's disclosure.

The ALJ finds that Respondents have failed to show by clear and convincing evidence that TPL is not entitled to claim the earlier priority date based on Respondents' contention that the "means for mapping..." elements are not disclosed in the '638 Patent. For example, the ALJ finds that the '638 Patent contains the following disclosures that support this element:

- A converter chip / controller chip "that is programmed to read and write I/O pins that are connected to flash-memory-card connectors and USB interface. Several different controller and transfer routines are written and programmed . . . . CPU 92 then executes these routines. A high-level scanning routine can sense when a flash-memory card is inserted. CPU 92 can then begins execution of another routine specific to that type of flash memory card. Transfer and handshake sub-routines can then be called." '638 Patent at 10:42-53.
- "Shifter 98 is connected to the data and clock signals from connectors . . . . When data is read from the flash-memory card, a clock is pulsed to synchronize the data transfer. Shifter 98 clocks in one bit (serial) or word (parallel) of data for each clock pulse." '638 Patent at 11:6-13.
- In addition, Figure 10 shows that the shifter 98 is part of the controller or converter chip. '638 Patent at Fig. 10

Accordingly, the ALJ finds that Respondents have failed to prove by clear and convincing that this element is not present in the '638 Patent.

**2. "Contact Pins Mounted On Said Surface," "Contact Pins Integrated Within the Molded Plastic," and "Contact Pins Protruding From the Upper Surface" or "Lower Surface"/"Upper Portion or Lower Portion"**

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Respondents next argue that the '638 Patent does not teach the structural features of the contact pins that Respondents assert the '443, '424, and '847 Patents identify as novel features of their later-filed applications. (RIB at 90.) Specifically, Respondents contend that the '638 Patent does not refer to adapters that are made of molded plastic, to embedding contact pins in the molded plastic, or to contact pins that protrude from upper or lower surfaces of the molded plastic. (RIB at 90-91.) Respondents argue that the '638 Patent's disclosure of a "connector" is insufficient because "connector" can include plastic and non-plastic connectors and Respondents assert that plastic connectors were identified as an improvement in the '443 Patent. (RIB at 91.) Moreover, Respondents argue that TPL distinguished the '443 Patent over the prior art because it used molded plastic. (RIB at 91.) Respondents also argue that the '638 Patent does not disclose multiple sets of contact pins mounted to a housing surfaces at a location adapted to interface with different cards. (RIB at 91.)

TPL argues that while the '638 Patent does not use the word "molded plastic," it does disclose "connectors" and a person of ordinary skill would have understood that to include connectors made of molded plastic. (CIB at 235-236; CRB at 56-58.) TPL also makes similar arguments with respect to whether the contacts should protrude from the connector. (CIB at 236-237.)

The ALJ agrees with TPL that Respondents have not shown that the '443, '424, and '847 Patents are not entitled to the effective filing date of the '638 Patent because they do not disclose the connectors and contact pins claims in those patents. As TPL has shown, the '638 Patent does disclose connectors. ('638 Patent at Figure 3B, 2:38-50, 3:29-35, 4:21-24, 7:45-59, 7:62-8:32, 8:30-35, 8:67-9:3, 12:34-41, 19:19-26.) Moreover, as TPL has further shown, a person of ordinary skill would have understood this disclose to include the claimed connectors and contact

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pins. (CX-0944C at Q/A 134, 135A, 136, 138; Tr. 397:22-287:8, 401:9-402:7, 610:7-25.) Accordingly, the ALJ finds that Respondents' arguments fail to carry their burden of proof and are rejected.

### **3. Means for Identifying a Type of Card**

Respondents also argue that the '638 Patent fails to disclose a means for identifying a type of card as recited in the asserted claims of the '424 Patent. Respondents argue that Order No. 23 identifies card detect lines and the binary state of data lines as part of the structure corresponding to this means element. (RIB at 92.) Respondents contend that the '638 Patent has no disclosure of the structure that corresponds to the use of card detect lines multiplexed with data lines of another card format. Thus, Respondents argue that the '638 Patent does not disclose the full scope of the means for identifying. (RIB at 92.)

TPL responds that associated structure for the "means for identifying..." is a controller and that it is undisputed that the '638 Patent discloses a controller. (CRB at 59.) Moreover, TPL argues that the '638 Patent teaches using a controller to identify the type of card inserted into the port. (CRB at 59 (citing CX-0944C at Q/A 168-169; '638 Patent, Figs 4A-E, 5 (pins 25, 26), 4:60-7:32, 8:14-21, 10:42-53, and 11:44-57).) Moreover, TPL notes that the '638 Patent states "Converter chip 40 detects when a flash-memory card has been inserted into one of the connectors." (CRB at 59 (quoting '638 Patent, 8:38-42).) Thus, TPL argues a person of ordinary skill would understand that the inventors were in possession of a controller for identifying the type of memory card inserted into said port at the time of filing.

The ALJ agrees with TPL that the specification contains adequate disclosure of the means for identifying a type of card. (See CX-0944C at Q&A 168-169; '638 Patent, Figs 4A-E,

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5 (pins 25, 26), 4:60-7:32, 8:14-21, 8:38-42, 10:42-53, and 11:44-57.) Accordingly, the ALJ finds that Respondents have not shown that this element is not disclosed in the '638 Patent.

#### 4. Fewer Signal Lines Than Contact Pins

Respondents contend that the '638 Patent also fails to disclose the '847 Patent's limitation that the number of signal lines in the adapter be fewer than the number of contact pins provided within the housing. (RIB at 92.) Respondents argue that TPL's expert "acknowledged that the elements that he identified from the '638 Patents [*sic.*] as allegedly teaching this feature — a double arrow connecting a converter chip 40 to a connector 44 in FIG. 3B and a connection between USB chip 40 and connector 64 in FIG. 6 — do not disclose a structure that provides fewer signal lines for contact pins provided in a housing." (RIB at 92.) Respondents assert that "[w]ith respect to the FIG. 3B configuration, Mr. Buscaino testified there are 50 signal lines for a 50 pin CompactFlash connector 44." (RIB at 92 (citing Tr. 649:23-650:8).) Respondents further assert that "[f]or the FIG. 6 configuration, [Mr. Buscaino] testified there are 9 signal lines for a 9 pin MMC/SD connector." (RIB at 92 (citing Tr. 651:4-20).) Respondents argue that this demonstrates that there are an equal number of signal lines as contact pins, not fewer as the '847 Patent's claims require. (RIB at 92-93.) Respondents further dispute TPL's contention that the number of pins in connector 44 is fewer than the number of pins on the controller 40. (RRB at 54.) Respondents argue that this still does not provide support the priority date because TPL does not discuss "signal lines" or "contact pins" in its argument. Respondents argue that TPL "confusingly compares pins on a controller to pins on a connector 44 that receives adapters and not memory cards." (RRB at 54.) Respondents assert that controller 40 is not a housing having a port and surface with pins adapted to interface with the electrical contacts of memory cards and thus its pins are not contact pins.

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TPL responds by arguing that Mr. Buscaino testified that this element is disclosed by Figure 3B (double arrow), 6, 7, and 9 (line connection 40 and 64). (CIB at 240 (citing CX-0944C at Q/A 187-188).) TPL argues that Mr. Buscaino explained that signal lines are the electrical paths between the interconnection pins and the pins on the controller chip and are usually traces on the PCB on which the chips and connectors are mounted. (CIB at 240.) TPL argues that as shown in Figure 3B of the '638 Patent, the number of pins in the connector 44 are fewer in number than the pins on controller 40. (CIB at 240.)

The ALJ agrees with TPL that Respondents have failed to show that this element is not met. As an initial matter, the ALJ notes that the only evidence cited by Respondents are snippets of testimony by Mr. Buscaino on cross examination. They point to no testimony by their own expert. As TPL explained, the number of connections on the controller are fewer than the number of connections at the connector. Contrary to what Respondents claim, this is not irrelevant. This demonstrates that while each connection in the connector has electrical connection connected to it, some of those connections are in fact the same signal line. Moreover, TPL offered evidence, namely the testimony of Mr. Buscaino, that this element is disclosed in the '638 Patent. While the ALJ believes that the evidence offered by both sides leaves much to be desired, the ALJ cannot say that Respondents have demonstrated by clear and convincing evidence that claim 1 is not entitled to claim priority to the '847 Patent. *See Certain Adjustable Keyboard Support Systems and Components Thereof*, Inv. No. 337-TA-670, Final Initial Determination at p. 77, 93.

## **5. Other Elements**

Respondents also raise in their Post-Hearing Reply Brief a number new elements that they claim are not contained in the '638 Patent that were not contained in their Opening Post

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Hearing Brief. The ALJ declines to consider these new arguments raised for the first time in their reply brief. Respondents bear the burden of showing that TPL's patents are not entitled to claim priority to the parent application disclosed on their face. Respondents failed to raise these arguments in their opening brief. Moreover, Respondents' reply brief contains only the barest amount of argument (a single paragraph) and cites no evidence to support their clear and convincing evidence burden. Arguments that are not supported, particularly for arguments on which a party bears the burden of proof by clear and convincing evidence, will not be considered. While TPL did provide some argument in its opening brief on these points because they were contained in Respondents pre-hearing briefs, the ALJ will not allow Respondents to raise new arguments on which they bear the burden of proof in their reply brief. Accordingly, the ALJ finds that Respondents' arguments that the '638 Patent does not disclose xD cards or Wi-Fi is waived.

### **C. The Prior Art Devices**

Respondents have put forward three prior art devices that they contend (in various combinations) anticipate or render obvious the asserted claims of the asserted patents. Because these three references all raise common threshold issues of public availability and clear and convincing proof of their content, the ALJ considers those issues separately here. These devices are the Atech Pro II, the Dazzle 6-in-1 DM-8400, and the MultiFlash Device.

#### **1. Atech Pro II**

Respondents contend that the asserted claims of the '623 Patent and the '549 Patent are invalid under 35 U.S.C. §§ 102 (a) and (b) based on the Pro II that was allegedly sold by Atech Flash Technology, Inc. ("Atech"). (RIB at 230.) Respondents argue that the Pro II sold beginning in October 2001. (RIB at 230.) Respondents assert that the Pro II was manufactured



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by a company called [REDACTED]

[REDACTED] (RIB at 230.) Respondents further claim that on November 15, 2001, the Pro II device was publicly displayed at an electronics show in Las Vegas, Nevada. (RIB at 230.) Respondents also point to a review allegedly published on November 15, 2001 and some U.S. sales that allegedly occurred in February 22, 2002. (RIB at 230.)

Respondents argue that TPL's examination of Mr. Eric Liu, who Respondents contend "designed and oversaw the production of the Pro II in 2001, and sold the Pro II in 2001, 2002, and beyond," did not establish that "any of Mr. Liu's documents or testimony are unreliable." (RIB at 231.) Respondents argue that Mr. McAlexander's opinion is "based on many different kinds of evidence, each of which buttresses the reliability of the evidence as a whole." (RIB at 231.)

TPL argues that Respondents have failed to prove that the Pro II device functioned the way they claim or that it existed when they claim. (CIB at 247.) TPL notes that Respondents principal witness regarding the Pro II device, Mr. Eric Liu, provided and testified documents that he obtained from web searches after he received a subpoena in this investigation. (CIB at 247.) TPL argues that the only proof Respondents have of the functionality of the Pro II device is based on a model that may have been manufactured in 2003. (CIB at 248.) TPL asserts that there is no corroboration of documentation regarding the functionality of the Pro II device in 2002 or before. (CIB at 248.) For example, TPL contends that RX-346, an internet review of the Pro II, contains no details about how the device functions and notes that the author had not received a device yet. (CIB at 248.) As for RX-0354C, TPL asserts that Mr. Liu obtained the document from the internet after he could not confirm that the document corresponded to the



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controller that was used in the Pro II device sold before the critical date. (CIB at 248-49.) In fact, TPL argues that Mr. Liu based his belief that RX-0354C related to the correct controller based on some information that [REDACTED] told Atech, which [REDACTED] based on information that was allegedly provided by the chip maker. (CIB at 249.) TPL argues that this fails to meet clear and convincing evidence.

The ALJ agrees with TPL that Respondents have not proved that the Atech Pro II device, as analyzed by Mr. McAlexander, was available before the priority date for the '632 and '549 Patents. While the ALJ agrees that Respondents offered evidence that devices that are possibly similar to the Pro II that Mr. McAlexander analyzed may have been available and sold before the critical date, Respondents failed to establish by clear and convincing evidence how those devices functioned *at that time*. Indeed, the testimony of Mr. Liu falls far short of clear and convincing evidence. While Mr. Liu offered some testimony as to the functionality, the documents he offered to corroborate his testimony and confirm the functionality of the device were all obtained from internet searches long after the fact and many of them were only obtained after TPL sent a demand letter asserting patent infringement to his company. For example, Mr. Liu admitted that RX-346 contained no technical details about how the device operated. (Tr. 125:12-25.) The ALJ further finds that Respondents contentions are undermined by their reliance on RX-0354C, a specification sheet for the [REDACTED] controller Mr. Liu believes was used in the Pro II. However, Mr. Liu admitted on the stand that he never had seen the document before he "Googled it" when he was searching for documents in response to the subpoena in this investigation that was served on him in 2012. (Tr. 132:22-133:17.) Mr. Liu further stated that he "assumed" that this was correct document, but did not know for certain. (Tr. 131:16-19.) Moreover, he admitted that there may be different version of the spec sheet. (Tr. 131:3-8, 131:9-

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15.) Indeed, Mr. Liu testified that he only learned that this may be the controller from discussions he allegedly had with a manufacturer of the device and from testing documents that were not submitted into evidence. This does not meet a clear and convincing evidence standard. Thus, the ALJ finds this evidence to be insufficient to establish by clear and convincing evidence that the Pro II analyzed by Respondents was available before the priority dates for the '623 and '549 Patents.

**2. Dazzle 6-in-1 DM-8400**

Respondents contend that the Dazzle 6-in-1 DM-8400 is prior art to the '623, '443, '424, and '847 Patents because Respondents allege that it was on sale and was first made available to the public as of October 24, 2001. (RIB at 236.) The ALJ has already determined that the '443, '424, and '847 Patents are entitled to a priority date before October 24, 2001, so the Dazzle 6-in-1 DM-8400 is not prior art for those patents. The only remaining issue is whether the Dazzle 6-in-1 DM-8400 is prior art for the '623 Patent.

The Respondents argue that they have proven that the Dazzle 6-in-1 DM-8400 ("Dazzle Reader") is prior art. (RIB at 236.) Respondents contend that TPL only "complains that witness' memories might be incorrect" or that documents produced by corporate and individuals may be facially incorrect. (RRB at 64.) Respondents argue that at the hearing they supported their invalidity challenges with reference to numerous evidentiary sources that demonstrate the prior art documents and products were published or publicly available prior to the effective filing dates of TPL's patents. (RRB at 64-68.) In response, Respondents complain that TPL attempts to attack the credibility or authenticity of certain isolated pieces of this evidence, ignoring the plethora of evidence that contradicts its theory. (RRB at 64-68.) Respondents argue that they have submitted evidence regarding the prior art products that is "self-corroborative," and as a

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whole shows that the prior art products are in fact prior art and invalidate the asserted claims of the Asserted Patents. (RRB at 64-68.)

The ALJ agrees with TPL that Respondents have failed to prove by clear and convincing evidence that the Dazzle Reader is prior art to the '623 Patent. Respondents arguments that they have met their burden in proving that the Dazzle Reader is prior art fall wide from the mark for a number of reasons. First, Respondents mistake not only who bears the burden of proving the reference is prior art, but also what their burden is. TPL is free to challenge the evidence that Respondents submitted because Respondents bear the burden of showing that the Dazzle Reader is prior art by clear and convincing evidence.

Second, Respondents failed to even present any evidence, besides a cursory assertion that the Dazzle Reader was prior art in their opening brief. This alone would be sufficient to warrant finding that they have failed to carry their burden.

Third, TPL is correct about many of their complaints about the "evidence" that Respondents have submitted. For example, the ALJ agrees with TPL and finds that the testimony and evidence submitted by Mr. Balasubramanian is entitled to almost no weight. While Respondents are correct that Mr. Balasubramanian did testify that he created his summary document that Respondents rely on (RX-0182C) "as part of [his] way of getting familiar with all the products...to increase my knowledge of it...", the ALJ does not find it to be entitled to much weight for a number of reasons. First, the document was prepared years after the events it allegedly documents happened. (RX-0177C at 194:21-195:23, 196:13-197:4). Second, involve events in which Mr. Balasubramanian was not involved. (RX-0177C at 194:21-195:23, 196:13-197:4). Third, Mr. Balasubramanian's reasons for producing such a document were not very clear nor was it clear that it was meant to be an accurate record of the actual dates when these

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events occurred. Indeed, the very nature of the document and its emphasis on dates is not the sort of document an engineer prepares to get himself familiar with products. Given that the timing of this document coincides with the beginning of TPL's licensing campaign (*see infra* Section VII.C), the ALJ suspects that this document may have been motivated at least in part by the possibility of litigation with TPL. Such documents are "dripping with motivations to misrepresent." *Hoffman v. Palmer*, 129 F.2d 976, 991 (2d Cir.1942) ( Frank, J.) (documents prepared for litigation are "dripping with motivations to misrepresent"), *aff'd*, 318 U.S. 109. In sum, the ALJ finds that these circumstances make this document extremely suspect and leads the ALJ to question Mr. Balasubramanian's assertions.

In addition, Mr. Balasubramanian's testimony is further suspect because he does not know who first sold the Dazzle 6-in-1. (RX-0177C at 206:14-21). He does not know how many versions of the Dazzle 6-in-1 were offered for sale because he "didn't handle that product." (RX-0177C at 240:3-7.) When asked when the Dazzle 6-in-1 was first sold, he testified: "I'm not aware of that one. The sales -- the sales detail, I'm not aware of it." (RX-0177C at 149:19-23.) Because press releases "usually [] comes when there is already a customer commitment," he "assum[ed]" it was sold in late 2001, but further testified "I don't know that." (RX-0177C at 149:19-150:9.)

Mr. Balasubramanian had no knowledge of some of the exhibits Respondents seek to introduce to support their date. For example, Respondents' counsel brought to his deposition document IDEN-ITC-0000034, which was marked as Exhibit 17 (now RX-0637). Mr. Balasubramanian testified that Exhibit 17 "wouldn't have come from me. I don't recall printing this." (RX-0177C at 142:5-9). Despite being Bates-stamped with his company's name, Identive, he could not testify to ever having seen Exhibit 17. He is merely "assuming" Exhibit 17 is the

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same as the article he “chanced upon” in 2007. (RX-0177C, 141:22-142:3). Mr. Balasubramanian was then shown Exhibit 29 (now, RX-0203), which has a different URL than Exhibit 17 and has a Hewlett-Packard Bates label, not an Identive label. In his deposition, he believed that Exhibit 29 was the basis for the “2001” introduction date entry on RX-0182C, but, as TPL points out, Exhibit 29 was produced by HP in this investigation and did not come from Identive or Mr. Balasubramanian. *Compare* RX-0203 (HP059512) *with* RX-0637 (IDEN-ITC0000034); (RX-0177C at 177:1-11). The ALJ further notes that Mr. Balasubramanian was not even able to distinguish between a Dazzle 6-in-1 and a Dazzle 8-in-1. (RX-0177C at 179:9-18).

Respondents also rely on Mr. Warner’s testimony. However, as TPL points out, Mr. Warner was also shown Balasubramanian Exhibit 17 (RX-0637). He did not recall reading the document before his deposition, was not sure where it came from, and believed the content came from SCM “[b]ecause it says so.” (Tr. 1446:14-1447:14). Mr. Warner testified on cross-examination that SCM made different Dazzle 6-in-1’s and that different Dazzle 6-in-1’s operated differently depending on when they were made, but he did not know how or in what manner the different Dazzle 6-in-1’s would operate differently. (Tr. 1447:15-1448:6).

TPL also notes that Mr. McAlexander relies on an engineering report from TechInsights for the Dazzle 6-in-1 DM-8400. TPL argues that that particular product in the report was manufactured in the seventh week of 2002 as indicated by the “0207” in the serial number. (Tr. 1519:7-25). The product could not have been sold in the U.S. until after it was made in China in 2002 and then shipped. (Tr. 1520:1-11).

Mr. McAlexander never reviewed the controller specifications for the Dazzle 6-in-1 DM-8400. (Tr. 1521:15-19). The test run by TechInsights on the Dazzle 6-in-1 DM-8400 was

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“corrupted.” (Tr. 1530:14-25). Mr. McAlexander testified that either the product or the card “wasn’t operating correctly.” (Tr. 1531:1-17). Later, he believed it was the card that was not operating correctly. (Tr. 1532:16-1533:3). He also had TechInsights tear down and test another Dazzle product manufactured in 2003. (Tr. 1533:4-1534:6, 1534:15-25). That testing showed the later manufactured Dazzle product could read SD cards in 4 bit mode. (Tr. 1535:9-19).

The ALJ finds that the evidence presented by Respondents simply does not permit the ALJ to find that the Dazzle Reader was available in November 2001. The ALJ reviewed Mr. Balasubramanian’s testimony and found that it was not credible and, further, he lacked firsthand knowledge of when these devices were available. The testimony of Mr. Warner provided little insight into the date that the products were available. Finally, the devices tested by Mr. McAlexander do not confirm that the products functioned the way Respondents claim before the priority date. Accordingly, the ALJ finds that Respondents have failed to meet the clear and convincing standard of proof regarding the Dazzle Reader.

**3. MultiFlash Product**

Respondents contend the AcomData MultiFlash product is prior art to the ’443, ’424, and ’847, and ’549 Patents with an April 2001 sale date. The ALJ has found that the priority date of the ’443, ’424, and ’847 Patents is before April 2001, and therefore the MultiFlash Product is not prior art for those patents. As for the ’549 Patent, Respondents contend that it was available before the date of the invention of June 4, 2002. The ALJ finds that Respondents have failed to show by clear and convincing evidence that the MultiFlash was available by that date for several reasons. Respondents argue that MultiFlash was on sale by April 2001 and they further contend that it was available by July 2001. (RIB at 195.) Respondents fail to argue for any other date, but evidence does not support either of those dates and there is no evidence in the

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record that supports a finding by clear and convincing evidence that it was available even by the '549 Patent date of invention.

First, the [REDACTED] controller chip used in the MultiFLASH product shown, however, has a date of "0139." (RX-0846C at 9). TPL presented "0139" means the chip was manufactured on the thirty-ninth week of 2001. (Tr 1522:7-1523:13). While the chip might have been available by that point, there is no evidence to support when the product was actually made available. At best, it shows that Respondents' assertion that the product was available in April 2001 does not match the evidence because the controller chip was not even manufactured until months after the date on which Respondents claim the finished product was sold. Respondents offer no alternative evidence that would support a finding by clear and convincing evidence about when it was available.

Second, Respondents cite to RX-0288C.0004-7 and argue the MultiFlash product appeared on Steve's Digicams website on July 18, 2001. *Id.* However, the ALJ finds that RX-0288C.4-7 is a document for the Iomega Click! Drive and does not support a finding by clear and convincing evidence that this particular device was available on that date. Respondents also cite to RX-1001.0004 to argue the MultiFlash product was on sale by April 6, 2001. (R1B at 126.) The ALJ finds, however, that although RX-1001.0004 may have been the AcomData website at some point in time, this page does not contain a product called the "AcomData MultiFlash." Rather, it refers to a "Flash! USB Memory Card Reader" and a "Multi-Format Memory Card Reader." The document does not indicate any product is on sale, much less the exact "MultiFlash product" Respondents contend is prior art. (RX-1001.0004.) Respondents have no evidence that the product pictured is the same or similar to the physical product claimed to be



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prior art. (RPX-0002.) Further, the document is undated other than the archive address at the bottom of the page. (RX-1001.0004.)

Third, Respondents submitted no evidence to date the image on any website. In fact, RX-0288 discussing the Dazzle 6-in-1 and the MultiFlash is one of the examples that shows why the Internet Archive's Affidavit is correct that images may have been placed on a page later than the dated HTML file. RX-288.34 places a time stamp of February 11, 2002 for the HTML file according to the URL text. ("http://web.archive.org/web/20020211185459/http://www.steves-digicams.com/2002\_reviews/dazzle\_6in1.html.") However, the date of the image relied on by Respondents is dated August 7, 2006—1,638 days after the HTML purportedly was present. RX-0288.35 discusses the MultiFlash and places a date of July 30, 2001 for the HTML file according to the URL text. ("http://web.archive.org/web/20010730070740/http://www.steves-digicams.com/2001\_reviews/multiflash.html.") However, the image relied on by Respondents is dated August 6, 2003—737 days after the text. ("http://web.archive.org/web/20030806082527im\_/http://www.steves-digicams.com/images4/multiflash\_drives.jpg")

Finally, Respondents' expert, Mr. McAlexander, relies on Steve's Digicam website review of a MultiFlash product in an attempt to establish how the product operated in April 2001. (Tr.1504:18-1505:20.) However, Mr. McAlexander relies on an engineering report showing the "0139" date for the controller chip, and inexplicably concludes that the tested product functioned the same as the MultiFLASH product shown in the Steve's Digicams July 18, 2001 review and could read SD and MMC cards. (RX-0288 at 34-37); (Tr.1504:18-1505:20). He relies on this information despite the fact that the Digicams review states "I have no Secure Digital or MultiMediaCard cards here so I could not try them...." (Tr. 1505:21-1506:10). Further, the



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Steve's Digicams document was produced as part of the Internet Archive's Affidavit that says "images that appear on a page may not have been archived on the same date as the HTML file." (RX-0288 at 1). The website states that MMC or SD cards were not tested; however, the picture on the website shows an MMC card. (Tr. 1505:21-1506:10); (RX-0288 at 34, 36). Respondents submitted no evidence to date the image on any website. Thus, the ALJ finds that Respondents' evidence fails to meet the clear and evidence standard of proof.

#### **D. The '443, '424, and '847 Patents**

Respondents offer at least 10 different invalidity defenses against these three related patents. As in other areas of their brief, Respondents' arguments suffer from their efforts to retain as many arguments as possible. The ALJ now proceeds through the bog of arguments Respondents raise to attempt to find those potentially meritorious defenses.

##### **1. The Lipponen Patents**

Respondents argue that the assert claims of the '443, '424, and '847 Patents are rendered invalid by U.S. Patent No. 6,612,498 ("the '498 Patent") (RX-0807) and EP 1 037 159 ("the EP '159 Patent"), which Respondents group together and call the Lipponen Patents. (RIB at 97-111.) The ALJ declines to consider these references together. Either the '498 Patent or the EP '159 Patent anticipates, not an amalgamation of both. While the two Lipponen references are certainly related—they have similar specifications and claim priority to the same Finnish patent application, the law of anticipation requires a single prior art reference that includes all the elements of the claim in the four corners of the document. *See Net MoneyIn, Inc. v. Verisign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008) ("[T]he proponent [of anticipation] must show that the four corners of a single, prior art document describe every element of the claimed invention. (quotation marks omitted).). The ALJ further notes that "differences between the prior art

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reference and a claimed invention, however slight, invoke the question of obviousness, not anticipation.” *Id.* at 1371. Respondents do not cite to these separate references separately, but instead merge them together into one reference obscuring one from the other, which creates the potential for finding anticipation in a situation where the element is not found in both references. It appears that the bulk of Respondents’ pinpoint citations are to the EP ’159 Patent, so the ALJ will only consider that patent in his invalidity analysis. The ALJ will not risk confusing the matter by taking Respondents’ approach of inexplicably combining references together.

The ALJ finds that the EP ’159 Patent published on September 20, 2000. (RX-0985.) Thus, the ALJ finds that the EP ’159 Patent is prior art under 35 U.S.C. § 102(a).

The ALJ finds that Respondents have failed to prove that the EP ’159 Patent discloses a “multi-memory media adapter” and therefore cannot anticipate the asserted claims the ’443, ’424, and ’847 Patents. The ALJ finds that while Respondents have shown that the invention disclosed in the EP ’159 Patent supports two types of cards, there is only one memory media card disclosed. (RX-0985 at ¶ 0002.) The ALJ finds that Respondents have not shown by clear and convincing evidence that SIM cards or “Subscriber Identification Module” cards, the other type of card disclosed, are memory cards. (*Id.*) TPL provided evidence that SIM cards are embedded integrated circuits used primarily for identification purposes in mobile telephone devices. (*Id.*) Accordingly, the ALJ finds that Respondents have failed to show that the EP ’159 anticipates the asserted claims of the ’443, ’424, and ’847 Patents. (See CX-1205C at Q/A 440-465.)

As for obviousness, Respondents offer barely half a page of analysis of why the Lipponen Patents would render the asserted claims of the ’443, ’424, and ’847 Patents obvious. They offer the same boilerplate motivation to combine: “The combination of references would have been obvious to a person of ordinary skill in the art because the references are in the same

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field, the references show housing for similar memory cards, any combination would be a trivial modification capable of being implemented as a mere workshop improvement, and any such combination would yield predictable and expected results.” (RIB at 105-106.) This same reasoning is repeated elsewhere Respondents brief. (RIB at 122, 214.)

A little more than one page of analysis is simply insufficient to overcome the presumption of validity and to meet the clear and convincing standard of proof for invalidity of three patent claims. *See Certain Mobile Devices, Associated Software and Components Thereof*, Inv. No. 337-TA-744, Final Initial Determination, at 117 (December 20, 2011) (unreviewed in relevant part).

## **2. The SD Specification**

Respondents’ arguments regarding invalidity based on the SD Specification are based TPL’s infringement assertions against the accused products for the “mapping” elements of the asserted claims. (RIB at 114-118.) The ALJ rejected TPL’s infringement arguments for “mapping.” (*See supra* Section V.B.1.) In light of that determination, the ALJ finds that Respondents have failed to show by clear and convincing evidence that that the SD Specification meets the “mapping” limitation of the asserted claims of ’443, ’424, and ’847 Patents. Accordingly, the ALJ finds that Respondents have not shown by clear and convincing evidence that the asserted claims of the ’443, ’424, and ’847 Patents are rendered invalid by the SD Specification.

## **3. MultiFLASH Product**

As the ALJ found above, Respondents failed to prove by clear and convincing evidence that MultiFLASH is not prior art to the ’443, ’424, and ’847 Patents. (*See supra* Section VI.C.3.)

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Accordingly, the ALJ finds that Respondents have not proven that the MultiFLASH product renders the asserted claims of the '443, '424, and '847 Patents invalid.

#### **4. Dazzle 6-in-1 DM-8400 Reader**

As discussed above, the Respondents have failed to show that the Dazzle 6-in-1 DM-8400 Reader is prior art to the '443, '424, and '847 Patents. (*See supra* Section VI.C.2.) In addition to those general reasons stated above, the ALJ finds two additional reasons why the Dazzle 6-in-1 DM-8400 Reader fails to render the asserted claims of the '443 and '424 Patents invalid. First, because the ALJ has found that the '443 and '424 Patents have a priority date of July 6, 2000, even if the Respondents proved the October 2001 date, the Dazzle 6-in-1 DM-8400 would still not be prior art. Second, the Respondents base their invalidity allegations on the fact that they allege that the Dazzle reader, as with the accused products, has a SD/MMC slot. Thus, Respondents contend that if the accused products infringe and the ALJ found that the shared SD/MMC slot constituted "mapping," then the Dazzle reader would also invalidate those claims. However, the ALJ found that the shared SD/MMC slot to not practice mapping as claimed in the '443 and '424, so the Dazzle reader would also not invalidate the asserted claims.

#### **5. The Sun References**

Respondents argue that the asserted claims of the '443, '424, and '847 Patents are invalidated by two related prior art references, Japanese patent publication JP2001-184462 ("the '462 Publication") (RX-0821) and U.S. Patent No. 6,663,007 ("the '007 Patent") (RX-0819), which Respondents refer collectively to as the Sun References.<sup>5</sup> The '462 Publication published on July 6, 2001 and therefore is not prior art to the '443, '424, and '847 Patents under

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<sup>5</sup> The ALJ notes that once again Respondents confusingly collect several related, but separate, prior art publications and confusingly refer to them as a single reference.

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the effective filing date of July 6, 2000. (RX-0821.) The '007 Patent was filed on November 13, 2000 and issued on December 13, 2003 and is therefore also not prior art to the '443, '424, and '847 Patents under the effective filing date of July 6, 2000. (RX-0819.) Accordingly, the ALJ finds that Respondents have not shown that the Sun References invalidate the asserted claims of the '443, '424, and '847 Patents because they are not prior art.

#### **6. The '928 Publication**

Respondents assert that Japanese patent publication JP H11-15928 ("the '928 Publication") invalidates the asserted claims of the '443, '424, and '847 Patents. (RIB at 153-154.) The ALJ finds that the '928 Publication, which published on January 22, 1999, is prior art to the '443, '424, and '847 Patents under 35 U.S.C. 102(b). (RX-0817.)

The ALJ begins by noting that Respondents contend that the '928 Publication renders obvious *all* of the asserted claims of the '443, '424, and '847 Patents. However, its analysis is limited *only to* "[t]hose claims are rendered obvious by the '928 Publication." Even if these conflicting statements could somehow be reconciled, This is grossly inadequate. Thus, the ALJ finds that Respondents have failed to prove the asserted claims of the '443, '424, and '847 Patents are rendered obvious by the '928 Publication.

As for Respondents' anticipation analysis, it is only very slightly better, but the ALJ finds that it is still inadequate. There is no element-by-element analysis as required by the ALJ's Ground Rules. There is one paragraph of discussion of some generic elements of the '443, '424, and '847 Patents that Respondents appear to apply to all of the patents. (RIB at 153-154.) The only specific discussion of the '443, '424, and '847 Patents with respect to the '928 Publication is a single sentence for each patent: "The '928 publication discloses all of the limitations of the asserted claims [list of asserted claims] of the ['443, '424, or '847 Patent] and, therefore the '928

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publication anticipates the asserted claims.” (RIB at 154.) The ALJ finds that this is inadequate to carry Respondents’ burden to prove invalidity by clear and convincing evidence. Accordingly, the ALJ finds that Respondents have failed to prove invalidity under the ’928 Publication by clear and convincing evidence.

## **7. Toshiba Prior Art**

Respondents argue that the asserted claims of the ’443, ’424, and ’847 Patents are invalid as obvious over what they designated the “Toshiba Prior Art”: (1) the TC6375AF Controller chip (RX-0862); and (2) the “Saito” patents (RX-0883; RX-2383.) Respondents contend that the datasheet for the TC6375AF constitutes a prior art publication because it bears a publication date of February 15, 2002 and identifies other version of the datasheet that were issued March 7, 2001 (revision 0.94) and May 18, 2001 (revision 1.00). (RX-0862.125.) Setting aside that Respondents presented no evidence regarding the public availability of this datasheet or confirming the date it was available, the ALJ finds that the TC6375AF is not prior art because even if Respondents’ contentions are correct it was available after the priority date for the ’443, ’424, and ’847 Patents. (RX-0862.125.)

As for the Saito Patents, the ALJ finds that they are also not prior art. The Japanese application JP 2001-223044 (RX-2383) published on August 17, 2001, which is after the priority date for the ’443, ’424, and ’847 Patents. (RX-2383.) Accordingly, the ALJ finds that it is not prior art. Respondents assert that the U.S. counterpart of the Sato patents (RX-0883) has a priority date of August 18, 2002. (RIB at 155.) The ALJ finds that the U.S. counterpart of the Sato patents is not prior art to the ’443, ’424, and ’847 Patents. (RX-0883.)

Moreover, even assuming that the TC6375AF data sheet and the Saito Patents are prior art, Respondents provided no motivation to combine these two references. (RIB at 154-158.)

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Accordingly, because Respondents have not shown that the Toshiba Prior Art is prior art, the ALJ finds that the Toshiba Prior Art does not render the asserted claims of the '443, '424, and '847 Patents obvious.

**8. Indefiniteness**

Respondents contend that the asserted claims of the '424 and '847 Patents, which each recite the claim element "a means for mapping power ground or data signals between said [interconnection pins/interconnection means/signal lines] and said one or more contact pins depending upon the identification of the type of memory card inserted into said port," are invalid because they are indefinite under 35 U.S.C. § 112(f) for failing to disclose an adequate algorithm. Respondents argue that while the corresponding structure is a controller, there is no disclosure of the algorithm to perform mapping for that controller. Respondents assert that without an algorithm or any other limiting structure the asserted claims of the '424 and '847 Patents are invalid as a matter of law. The ALJ finds that the testimony of Mr. Buscaino persuasive and the ALJ finds the citations therein sufficiently disclose an algorithm for mapping. (*See* Tr. 830:1-24; CX-1205C at Q/A 1166-1184.) Accordingly, the ALJ finds that Respondents have failed to prove by clear and convincing evidence that the asserted claims of the '424 and '847 Patents are invalid as indefinite under 35 U.S.C. § 112(f).

**9. New Matter**

Respondents argue that the asserted claims of the '424 Patent are invalid under 35 U.S.C. § 112(a) because they rely on new matter. (RIB at 161-162.) Specifically, Respondents contend that the "means for identifying the type of card inserted into said port" element does not find support in the original '424 Patent specification. (RIB at 161.) Respondents point to the structure identified for this element ('424 Patent at 6:36-53), and claim that part of this section is



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new matter that was added by amendment when the '424 Patent was pending at the USPTO. (RIB at 162.) Respondents assert that when TPL added this material, it argued that the added material was present in the '638 Patent, but Respondents argue that it was not. (RIB at 162.) Respondents contend that "[t]he description as it appears in the '638 Patent, described card detect lines that appeared in three separate, format-specific passive adapters 30, 32, 34 of Figure 3B." (RIB at 162 (citing JX-0005 at 5:60-7:32).) Respondents argue that when it added this matter TPL transformed this disclosure. (RIB at 162.)

"[I]n the context of a validity challenge based on new matter, the fact that the [PTO] has allowed an amendment without objection is entitled to [an] especially weighty presumption of correctness in a subsequent validity challenge based on the alleged introduction of new matter." *Commonwealth Scientific and Indus. Research Organisation v. Buffalo Tech. (USA), Inc.*, 542 F.3d 1363, 1381 (Fed. Cir. 2008) (quotation omitted). Whether an amendment's additions constitute "new matter" is a factual inquiry, and Respondents must present clear and convincing evidence demonstrating that the claims at issue injected new matter. *Id.* at 1380; *Brooktree Corp. v. Advanced Micro Devices, Inc.*, 977 F.2d 1555, 1574 (Fed. Cir. 1992). The ALJ finds that Respondents new matter defense must fail. Respondents came forward with only attorney argument to support their interpretation of what the '638 Patent disclosed and whether that disclosure supported the additions to the '424 Patent, which the USPTO had allowed and found were supported by the '638 Patent. Accordingly, the ALJ finds that Respondents have failed to carry their clear and convincing burden of proof that the asserted claims of the '424 Patent are invalid for new matter.

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**10. Written Description**

Respondents contend that claim 1-3 of the '847 Patents are invalid for lack written description. (RIB at 162-163.) Respondents argue that this claim "refers to two controllers at two different locations within an adapter." (RIB at 163.) Respondents assert that "[t]he second controller is between the signal lines and contact pins." (RIB at 163.) Respondents further assert that "[t]he first controller is provided on one side of the contact pins, away from an interconnection means which is recited as being on another side of the signal lines connecting those signal lines to the contact pins." (RIB at 163.) Respondents conclude that "[t]hus, the two controllers are recited as being in separate locations from each other." (RIB at 163.) Respondents argue that there is no written description of a "dual-controller" system. (RIB at 163.)

The ALJ rejects Respondents' argument. It is based on their strained and unnatural reading of the claims and appears to reprise an argument that the ALJ has repeatedly rejected. (See Order No. 40.) In the motion for summary determination of non-infringement ruled upon in Order No. 40, Respondents first floated this argument that the controller must be located between the signal lines and the contact pins. They based it on a strained reading of the claims. The ALJ lays out a little extra reasoning to help prevent this argument from rising from the grave a third time.

Respondents' argument is based on the final element of claim 1 of the '847 Patent, which states:

Means for mapping power ground and data signals between said lines and said contact pins depending upon the identification of the type of memory card inserted into said port; wherein the means for mapping comprises a controller.

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Respondents' underlying "logic" (which is laid out fully in their summary determination motion) is that in Order No. 23, the ALJ construed this element (and the other similar elements in the other '443, 424, and '847 Patents) as a "controller." Respondents then performed what can best be described as a "mad lib" exercise substituting "controller" in for this element. However, where their reasoning went wildly off track is that they limited the element to only the phrase "means for mapping," despite the *Markman* Order's clear explanation that the construction was for the entire element (not just the phrase "means for mapping"). (See Order No. 23 at 33-39.) Thus, the element, in their understanding, came to read "[controller for mapping power ground and data signals] between said lines and said contact pins depending upon the identification of the type of memory card inserted into said port; wherein the means for mapping comprises a controller." Based on this substitution, they reasoned that the "controller" must be located between the contact pins and signal lines.

This reading is absurd—the element is not limited to the phrase "means for mapping." As the parties *agreed* at the *Markman* hearing, the function for the element is not just "mapping," it is "mapping power, ground, and data signals between said lines and said contact pins depending on the type of memory card inserted into said port." (See EDIS Doc. No. 486171, Respondents Responsive *Markman* Br. at 20 (showing both parties proposed functions and claim element for this term).) Thus, this is all functional and not structural language. The language "between said lines and said contact pins" does not describe the physical location of the controller—it is attempting to describe the function of the controller. In other words, the function of the controller is to take a signal at a certain contact pin, *e.g.*, the power signal, and map it to a particular signal line, *e.g.*, line 1, based on the type of card inserted into the controller. While the ALJ freely admits that the claim element was poorly drafted, the ALJ's claim construction, when

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correctly followed, reads more naturally since the controller maps the identity of the signal that comes in at the contact pin to a particular signal line. Under this reading the controller connected to the signal lines in the first element of the claim is the controller that does the mapping in the last element of the claim. Thus, the ALJ finds that there is no “dual-controller” requirement of the claims and no written description problem.

**E. '549 Patent****1. The AwYong Thesis**

The Respondents contend that the asserted claims of the '549 Patent are anticipated and rendered obvious by a thesis authored by Chee-Kong AwYong entitled “An Integrated Control System Design of Portable Computer Storage Peripherals” that states that it was submitted to the Department of Electrical and Control Engineering at the National Chiao-Tung University in Taiwan (the “AwYong Thesis”), (RX-0456). Respondents claim that the AwYong Thesis was publically available as of December 22, 2000. (RIB at 185.) In support of this contention, Respondents submit the testimony of Dr. Robert Ellett, a librarian Respondents hired to testify. Respondents contend that “Dr. Ellett explained the MARC (Machine Readable Cataloging) system and his inspection of the MARC record for the AwYong Thesis[,] which he obtained the National Chiao-Tung University (NCTU) Library in Hsinchu, Taiwan.” (RIB at 185.) Respondents further contend that “[Dr. Ellett] testified about the process by which the AwYong Thesis was indexed, cataloged, shelved, and publicly searchable.” (RIB at 186.) Respondents argue that “[a]s explained by Dr. Ellett, the thesis was submitted in June 2000 (as indicated on the cover of the thesis); approved by the thesis advisor on June 9, 2000 (as indicated on page 2 of the thesis); and indexed, cataloged, shelved, and publicly accessible as of December 22, 2000 (as indicated on the back cover of the thesis).” (RIB at 186.) Respondents continue that “[a]s Dr.

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Ellett explained, NCTU is a public university whose resources are available to the general public, and thus a member of the public would be able to search for the [AwYong] Thesis as of December 22, 2000.” (RIB at 186.) Respondents emphasize Dr. Ellett’s expertise in library science. (RRB at 72.) Respondents further argue that Dr. Ellett’s testimony is not based on “his conversation with the Taiwanese library, but rather from documents.” (RRB at 73.) Respondents argue that Dr. Ellett is simply a fact witness on the MARC system and that the conversation with Taiwanese librarian “simply confirmed his understanding of the documents and that the university library followed the standard practice of using the MARC system to indicate the availability of a publication.” (RRB at 73.) Based on this testimony, Respondents assert that the AwYong Thesis is prior art under 35 U.S.C. § 102(b).

TPL argues that Respondents have failed to present competent evidence that establishes that the AwYong Thesis is prior art to the ‘549 Patent. TPL argues that Dr. Ellett is a hired witness who Respondents paid to call a Taiwanese librarian to discuss a document he had no personal knowledge of, and then Dr. Ellett testified about what he hear from the Taiwanese librarian. (CRB at 83.)

The ALJ agrees with TPL that Respondents have failed to prove that the AwYong Thesis is prior art to the ‘549 Patent. The ALJ begins by noting that Respondents efforts to prove that AwYong Thesis was prior art are inappropriate. While the ALJ has explained that the Administrative Procedure Act permits the ALJ to receive hearsay evidence and give it appropriate weight, this does not amount to a free pass. Respondents attempt to use the flexibility of the APA to enable them to, in effect, manufacture fact witnesses for hearings. This

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is simply improper. Indeed, the infirmities of Dr. Ellett's "fact" testimony are manifest.<sup>6</sup> First, Dr. Ellett had no personal knowledge of the AwYong Thesis or of the particulars of the NCTU Library System before he was retained to testify in this investigation. He is an expert in general library science; not a person knowledgeable about the particular facts of this case, the AwYong Thesis or the NCTU library in Taiwan.

Second, much of the testimony he attempts to offer appears to be expert testimony, not fact testimony. Respondents offer these opinions (or as he calls them in his witness statement "observations") without providing a proper expert report or identifying him as an expert. In particular, his interpretation of the MARC record and his opinion that based on the MARC record and "standard library practice," (RRB at 73), the AwYong Thesis would be publicly available are really expert opinions masquerading as fact testimony. While he is certainly permitted to come and testify about the MARC system generally and how it works, it goes beyond the bounds of fact testimony for him to examine records from the Taiwanese library and then offer an opinion based on those documents and his expertise in the MARC system as to when the AwYong Thesis was publicly available. Thus, this improper opinion testimony is entitled to no weight.

Third, nearly all of his non-expert (*i.e.*, non-MARC) testimony is simply him loosely recounting an off-the-record interview with a Taiwanese librarian arranged by the Respondents' attorneys and testimony on documents that the librarian provided to either him or to Respondents' attorneys (it is unclear when and to whom the documents were provided). (RX-0454 at Q&A 22-31; Tr. 1332:17-1339:3.) While the APA permits hearsay, hearsay arranged by counsel for a

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<sup>6</sup> The ALJ notes that he does not believe Dr. Ellett did anything improper. Instead, the ALJ believes that Respondents' counsel acted improperly by offering this evidence in this way.

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paid, non-party fact witness to testify about at the hearing, in lieu of the declarant, does not strike the ALJ as persuasive.

Finally, the ALJ notes that Dr. Ellett was paid \$250 per hour for his testimony. While this is normally only a minor consideration for expert witnesses or witnesses with actual personal knowledge, the ALJ notes that paying a third-party fact witness to “gain knowledge” just to testify. In the end, Dr. Ellett is really testifying in the place of the Taiwanese librarian who Respondents chose not to depose or bring to testify at the hearing. The ALJ notes that parties frequently take discovery in Taiwan or obtain such discovery through the Hague Convention. As such, it was entirely possible for Respondents to obtain this information in a conventional way. Without some exceptional circumstances, the ALJ declines to give any weight to Dr. Ellett’s testimony regarding information he obtained from his off-the-record, counsel-arranged conversation with the Taiwanese librarian, especially since Respondents should have obtained such testimony directly from said librarian.

The ALJ further notes that Respondents could avoided many of these problems by properly disclosing Dr. Ellett as expert witness and providing an expert report with his opinions regarding the public availability of the AwYong Thesis and the evidence he believed supported those opinions (such as the conversation with the Taiwanese librarian). However, Respondents chose a different route.

Setting aside the improper expert testimony and channeled testimony of the absent Taiwanese librarian, the only evidence that Respondents offered are the markings on the AwYong Thesis, a “Thesis Publication Certification” from National Chiao Tung University that “this degree thesis was on public display at the National Chiao Tung University on December 22,



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2000,” and a MARC record from the library. While this evidence is hearsay, the ALJ will allow this evidence.

While this evidence indicates that it is possible that the AwYong Thesis was publicly available, the ALJ finds that, without testimony regarding the specific library procedures in place at the NCTU library, this evidence cannot establish by clear and convincing evidence that the thesis was publicly available within the meaning of U.S. patent law. *See SRI Int'l Inc. v. Internet Security Sys., Inc.*, 511 F.3d 1186, 1188 (Fed. Cir. 2008). The ALJ notes that even if he gave weight to Dr. Ellett's testimony, it would be insufficient without more particulars about the availability of the thesis to say that the thesis was prior art under a clear and convincing evidence standard.

Accordingly, the ALJ finds that the Respondents have not shown that the AwYong Thesis anticipates or renders obvious the asserted claims of the '549 Patent.

**2. MultiFlash Product**

As discussed above, the ALJ finds that Respondents have failed to prove by clear and convincing evidence that the MultiFlash Product is prior art to the '549 Patent. (*See supra* Section VI.C.3.) In addition, the ALJ finds Respondents failed to set forth a sufficiently detailed analysis to establish invalidity by clear and convincing evidence. The ALJ finds that a little more than two pages of analysis is simply insufficient to overcome the presumption of validity and to meet the clear and convincing standard of proof for invalidity of three patent claims. *See Certain Mobile Devices, Associated Software and Components Thereof*, Inv. No. 337-TA-744, Final Initial Determination, at 117 (December 20, 2011) (unreviewed in relevant part). It is clear to the ALJ that Respondents had more than sufficient pages to perform a proper analysis, but chose instead to perform inadequate cursory summations of an exceedingly large amount of prior